BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED BY ANDREW WYNTER, M.D.

No. V.] LONDON: SATURDAY, JANUARY 31, 1857. [NEW SERIES.

Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

KING'S COLLEGE HOSPITAL.

PLASTIC OPERATIONS ON THE FACE: TREATMENT OF VARICOSE VEINS BY LIGATURE AND SUBCUTANEOUS INCISION: ADMINISTRATION OF AMYLENE.

Mr. FERGUSSON operated last Saturday, for the third time, on a little girl who was labouring under a deformity of the face, caused by sloughing of the left angle of the mouth after fever. The child, when first admitted, presented a hideous appearance, the lower lip being deficient in its whole extent, and the upper in great part. Besides the deformity, she was much distressed by the difficulty of retaining food in her mouth while chewing, and by the constant flow of saliva. The first operation consisted in taking a piece of skin up from below the chin, in order to form a lower lip. This was successfully accomplished; the portion so displaced united satisfactorily to the refreshed edges of the cheek on each side, and thus a sufficiently full lower lip was formed, the only defect in which was, that, in consequence of the flap having contracted adhesions to the bone beneath it, especially towards the angle of the mouth, it was not sufficiently moveable. At the next sitting, a piece of the left cheek was brought down, and attached on one side to the refreshed edge of the remainder of the upper lip, and on the other to the angle of the new lower lip, in order to form a commissure to the mouth. This proceeding was also successful, but with a similar drawback as in the former operation, namely, that the new lip was too adherent to the jaw. This still left a large gap external to the newly formed left angle of the mouth, to fill up which was the object of the present procedure. The latter consisted in a division of the soft parts above the newly formed upper lip, by a v-shaped incision, so as to allow of the further displacement downwards of its external edge, which was then refreshed, and sewn to the similarly refreshed contiguous edge of the new lower lip. The hole was thus filled up, and the two lips left much more moveable, in consequence of the adhesions, which had before limited action, having been severed in the course of the dissection.*

The operation was necessarily protracted and troublesome. The patient was at first brought under the influence of amylene; but the anæsthesia so produced did not appear quite sufficiently profound: in fact, the insensibility produced by this vapour is so transient that the patient recovered sensibility during the intervals in which the anæsthetic was necessarily removed to make way for the operator. Dr. Snow accordingly substituted chloroform on a sponge. The patient still gave signs of pain, but was evidently not fully conscious. The case seemed to show that the new anæsthetic is less applicable than the old to cases where, from any cause (such as position, as in this case, the operator being single-handed, etc.), its administration cannot be continuous. In the operations which followed (amputation of the breast, excision of the eyeball, forcible flexion of an ankylosed elbow), it was given with perfect success.

* Is it out of place here to observe how much advantage might be expected, especially to plastic surgery, from the establishment of a photographic department in hospitals? Each stage of a case like this might be exhibited in photograph, and the lines of incision in each operation marked on a duplicate. Such likenesses would furnish a comment on the case more intelligible than pages of description.

Another case of plastic surgery is in the hospital, also under Mr. FERGUSSON'S care—that of a man who had lost the whole of the alæ of the nose. A piece had been brought down from the forehead, and left attached by a long bridge, its sides having united to the refreshed edges of the parts covering the nasal bones; the bridge had been turned back on the forehead, and helped to fill up the gap. At some future time, Mr. Fergusson proposes to attempt the formation of a septum nasi. A point which is observable in this case is, that the new nose has shrunk considerably since its formation, and thus the success has been less perfect than it would otherwise have been. We shall perhaps have occasion to recur to this tendency of parts supplied with less blood than natural to shrink in size, when illustrating another part of plastic surgery. We shall not fail to keep our readers informed of the progress of these two cases.

A case at present in King's College Hospital, under the care of Mr. HENRY LEE, illustrates the advantages of a plan recently invented by him for the radical cure of varicose veins. The patient is a female, of middle age, who had been suffering from great distension of the saphena vein in two places. The trunk of the vein was much enlarged about the middle of the thigh, and a cluster of varicose veins existed at the upper part of the calf. There was also a small ulcer on the leg.

The plan adopted by Mr. Lee is as follows:—Two needles were passed underneath the enlarged vein, at a distance of about two inches from each other, and a suture twisted around each. Care was taken not to wound the trunk of the vein itself. This proceeding was followed by adhesive inflammation around the part operated on, whereby the trunk of the vein was obliterated by coagulum. Three days after the passing of the needles, the vein was divided by a subcutaneous incision midway between the needles, and slight pressure applied by means of a pad of lint. On the fifth day, the needles were withdrawn. The operation succeeded completely at both points; and, ten days afterwards, the patient was completely well, and able to leave the hospital, so far as respected the disease for which she originally applied for admission. She was kept in, however, on another account. When seen, seventeen days after the commencement of the treatment, the vein appeared to be permanently obliterated at both points; the depressions corresponding to the points of section being quite perceptible, and the vessel above and below reduced to a solid cord, which was steadily shrinking from its original size. The ulcer was cured.

This method appears to unite the advantages of the two spoken of by Sir B. Brodie in his *Lectures on Pathology and Surgery*, pp. 189, 190, as having been adopted by himself and M. Velpeau respectively for the cure of varicose veins by subcutaneous incision and by ligature. The adhesive inflammation which follows the application of the ligatures renders the subsequent subcutaneous incision of the vein a perfectly safe proceeding, as the absence of hæmorrhage much increases the prospect of union of the little wound by first intention; and even if it, or the needle-tracks, should suppurate, there is no chance of the passage of matter into the venous circulation, in consequence of the interposition of a considerable clot between each of these and the heart; besides which the tracks of the needles are external to the canal of the vessel. Whether the cure will be permanent is a point which can of course only be determined by subsequent observation; even if not, the patient is for the present delivered from a very annoying infirmity, and has probably a long interval of health, at the expense of a treatment which appears neither painful, dangerous, nor protracted.

Apropos of amylene, a singular fact was related to us by Dr. Martin of St. Bartholomew's. He was administering this vapour to a patient who was about to submit to the operation of lithotrity, not for the first time. An ounce and a half of the fluid was administered in Dr. Snow's inhaler, and the operation performed. The patient, however, showed every sign of perfect consciousness during its performance, and declared,

both at the time and directly afterwards, that he felt as much of the operation as on the previous occasion, when no anæsthetic was given. Three days afterwards, on his being questioned, it was found that he had completely lost all recollection of the matter—that the operation had passed out of his mind, and that he knew no more about it than if he had been completely narcotised. It should be observed that the patient was a man of average intellect, and showed no other symptoms of defective memory. (T. H.)

ST. MARY'S HOSPITAL.

CASES OF DISEASE OF THE STOMACH.

Under the care of F. Sibson, M.D.

[*From notes supplied by* Mr. Hart, *House-Surgeon.*]

Case I. *Profuse Hæmorrhage, probably from an Ulcer of the Stomach. Large quantities of stimulants given. Hydrocyanic acid. Cure.* Mary C., aged 30, a cook, was admitted August 26th, 1856, on account of profuse vomiting of blood. This had occurred two days previously three times, to the extent, it was said, of a pint each time, the blood being "black and congealed." She had always enjoyed excellent health; the catamenia were regular, and were present at the time of the hæmatemesis. She knew of no cause for the attack, and had not previously suffered from pain or uneasiness at the stomach. The vomiting was preceded immediately by sensation of cold in the epigastrium, and by nausea.

On admission, her symptoms were merely those of weakness from loss of blood. Percussion and auscultation showed an apparently healthy condition of the viscera, both of the chest and abdomen, and she could bear pressure anywhere without pain. She was ordered to suck ice, and confined to simple diet. A mixture, containing fifteen drops of oil of turpentine was given every three hours, and a blister applied to the epigastrium. No vomiting occurred for two days, when she brought up a small quantity of clotty grumous-looking blood. The mixture was repeated every other hour, and the blister repeated, and a pill, containing a grain of acetate of lead and an equal quantity of opium, was given every hour. The hæmatemesis, however, occurred next day to the extent of more than a pint, with symptoms of great prostration; thready pulse, pale lips, cold breath, etc. Acetate of lead was now given in very large doses. On the following day the vomiting had not recurred, but she was so excessively weak, that it was thought necessary to give stimulants. Accordingly three ounces of brandy were allowed, with ice and cold beef-tea. The bowels acted on September 11th, the motions containing a good quantity of blood. During the next three days she lay in a very critical condition; the hæmatemesis did not recur, but blood continued to pass from the bowels, and she was in a state of extreme prostration, the pulse being hardly perceptible. The quantity of brandy was increased to five grains daily, and she was ordered to take citrate of ammonia and iron. Under this treatment she continued to gain strength during the next week; the pulse and colour improved, and there was no more vomiting: the motions also assumed their natural appearance. On the 12th of September she vomited her food once; and on the 14th complained of very acute pain in the stomach, accompanied by much collapse. The brandy was continued, diffusible stimulants given, and a blister applied. Under this treatment she so far improved that there was no recurrence of the hæmatemesis during the month; but the pain in the epigastrium and left hypochondrium continued, and these parts were tender to the touch. She was treated with taraxacum and hydrocyanic acid; a liberal allowance of nutritious food was given, and an increased quantity (seven ounces) of brandy. It is unnecessary to follow the details of this case further. Her strength gradually advanced, and she was sufficiently recovered, by the middle of October, to be allowed to leave the house for an hour. Still she occasionally vomited her food, and frequently suffered from nausea and pain after eating. This latter symptom disappeared early in November, and she was discharged at the latter end of that month, three months after admission.

Case II. *Hæmatemesis and Pain probably from Ulceration of the Stomach: Treatment by repeated Blisters, Opium, and Oxide of Silver: Cure.* Ellen T., aged twenty-four, a domestic servant, was admitted September 16th. She had suffered from hæmatemesis five years ago. The present attack had lasted about a month, the prominent symptoms being pain in the left hypochondriac region and vomiting of food. She had also vomited blood, but not constantly, nor in very large quantity. At the time of admission she was excessively weak, apparently in consequence of an almost total inability to retain food; no visceral disease was detected. She complained of great pain over the region of the stomach; the tongue was clean. Leeches were applied to the epigastric region with much benefit, a purge and enema administered, and a blister three days afterwards to the part. Milk diet was given, but she could not take much food. A mixture containing four drops of dilute hydrocyanic acid was now ordered, and appeared to allay the sickness after food. She still, however, complained of acute pain after eating. Blood having been passed on one occasion from the bowels, tannic acid was given in four grain doses three times a day, and the bleeding did not recur. The pain was combated by repeated blisters; still but little relief was obtained. On October 20th, she was ordered a grain of opium and a third of a grain of oxide of silver, to be taken three times a day, and the blister was repeated. From this time the pain diminished, and after a week's persistence in the medicine, began to yield rapidly. She was discharged cured two months after admission.

Case III. *Obstinate Dyspepsia: Vomiting of Food: Sarcinæ in the Vomit: rapid Cure, from Oxide of Silver and Opium.* William S., aged 35, was admitted October 7th. He was a tailor, who had been working in a close, unhealthy room, and had suffered in consequence from obstinate derangement of digestion and constipation. He had been conscious of a sensation of weight in the stomach, especially after food, for the last half year; and during four months of that time had been troubled by vomiting, at first only occasional, but latterly following every meal. Sometimes the whole of the food was rejected immediately, though usually it remained for about half an hour, and then about half was rejected. He had taken hydrocyanic acid with liquor potassæ, bismuth, etc., without experiencing any benefit. In these four months he had lost three stone in weight; and on admission presented an extremely cachectic aspect. He was left without medicine for three days, and dieted on nutritive fluid aliment; under this treatment his aspect improved, and he felt stronger; but the vomiting was constant. Sarcinæ were found in large numbers in the fluid ejected, which was estimated to contain about three-fourths of his food. On the 10th he was ordered a grain of opium and a third of a grain of oxide of silver three times a day, and a blister to the epigastrium. Under this treatment the vomiting subsided with great rapidity. On the 14th it is noted that he had only vomited twice in two days, each time after food, and the nausea was no longer a prominent symptom. The blister was repeated, and extract of belladonna with opium ointment applied to the raw surface. The vomiting did not recur after this date; but the pain after eating, especially solid food, persisted for about a fortnight. This also diminished to a mere sense of weight, and in a month after his admission he was well enough to be made an out-patient. The oxide of silver was continued the whole time, latterly diminished to a quarter of a grain, with an equal quantity of extract of belladonna.

Remarks. We have cited these cases out of Dr. Sibson's clinical book on account of their great practical interest. In the first two, there was every reason to believe in the presence of organic lesion. The great amount of hæmorrhage in the first case, the persistent pain in the part, together with the regularity and healthiness of all the other functions, left hardly a doubt on the point. Notwithstanding, however, the assumed presence of ulceration of the wall of the stomach, her extreme prostration rendered it necessary to keep her alive by large quantities of stimulants; in fact, she was much in the same condition as a woman exhausted by flooding. It is interesting to observe that the direct application of the spirit to the ulcerated mucous membrane did not seem to have any effect in increasing the hæmorrhage; nay, that after the commencement of this treatment hardly any fresh bleeding occurred. In the next case, although the evidence of ulcer was not quite so convincing, still the occurrence of previous hæmatemesis, the persistent pain, and the absence of any other cause for the symptoms, pointed to this as the most probable diagnosis. In this, as in the second case, one of obstinate functional derangement, the influence of the oxide of silver in allaying the irritability of the stomach was most marked. In all of them, blisters appear to have been of signal service. (T. H.)

WORCESTER INFIRMARY.

CASES OF DISEASE OF THE EYE.

Under the care of H. D. CARDEN, Esq., and H. W. BUDD, Esq.

[*Reported by* ERLIN CLARKE, M.B., *House-Surgeon.*]

CASE I. *Opacity of Capsule.* T. Gale, aged 29, formerly a soldier serving in India, until lately held a situation as attendant in a lunatic asylum, but was obliged to give it up from increasing defect of vision. He was admitted into the Worcester Infirmary, September 10th, 1856, under the care of Mr. Carden. It appeared from his statement that, some years ago, he was affected with traumatic cataract of the right eye, when he applied to Mr. Carden, who lacerated the capsule and broke up the lens, which was afterwards completely absorbed; but no useful amount of sight was recovered. Since that time, he had entirely lost the sight of the right eye.

The state of the eyes on admission was as follows:—The right eye presented a dilated and fixed pupil, with an opaque flake of the capsule of the lens lying across the pupillary aperture; the iris was of a greenish hue; the globe of the eye was of healthy firmness, and quite free from tenderness or pain. The left eye was apparently healthy; the iris was grey, and acted freely. Both eyes were rather prominent. Vision with the left eye was sufficiently clear to enable him to move about with freedom; but he was unable to read or to see anything distinctly, for, whenever he looked directly at an object, vision was obscured by coloured spots of various sizes, which occupied the line of direct sight. He also suffered much from a sensation of flashes of light affecting the left eye, which was much aggravated by any pressure on the globe of either eye. These symptoms were of some months' standing, and were increasing in severity; and, as he had applied to medical men of high standing both in Birmingham and London without relief, his spirits were much depressed.

He was first put upon the use of tonics for some little time, with much benefit to his general health, though the sight was not improved. Mr. Carden then determined to remove the opaque capsule from the right eye, thinking that its presence might be keeping up a chronic irritation, with sympathetic mischief in the left. A straight needle was introduced, as in the operation for couching; and an attempt was made to separate the capsule from its attachments. This was successfully done, except in one point, where it adhered firmly to the iris. The capsule was then pushed forwards through the pupil into the anterior chamber, and retained there by the needle, while a small section of the lower part of the cornea was made with a Beer's knife; through this a hook was passed, and the capsule held and readily detached by the needle, which had been retained *in situ* from the first. The withdrawal of the capsule and needle, and closure of the lids, completed the operation.

On the third day, the wound in the cornea had completely healed, the aqueous humour had been secreted, and the eye was painless, though of a yellowish tinge throughout, as if bruised. All this had gone on well, but there was little if any improvement in the left eye; and it was determined now to try the effect of mercury. This was pushed to salivation, when decided improvement began; the spots altered in colour, and appeared less dense than before. Tonics were now given; the man's health and spirits returned; and, on the 24th of November, he could read a newspaper with ease, though the spots had not entirely disappeared; and he was discharged at his own request, with every probability of retaining useful vision.

CASE II. *Conical Cornea.* William Portman, aged 17, a servant, was admitted under the care of Mr. Budd, October 11th, 1856. The cornea of the left eye was of a conical form, perfectly clear and transparent, and the other tissues of the eye apparently healthy; but he was unable to distinguish anything clearly with this eye. He could not read the largest print, nor could he tell whether a wall a few yards off was brick or white stone. This state had been coming on for several months; he was unable to account for it in any way. The other eye was perfectly natural, and its sight good. Mr. Budd directed the application to the affected eye of a small dark case with central aperture, so as to admit the rays of light only to the central part of the cornea. A little instrument of this kind was made of gutta percha, and the lad wore it for nearly a fortnight. Improvement of vision was almost immediate; and at the end of the time the patient could read small print with ease, and vision was also much more distinct. He was then provided with a more sightly apparatus in the shape of a pair of plain glass spectacles, the glass in front of the left eye being blackened, leaving only a small central aperture about a line in diameter. This was found to answer the purpose, and he was discharged.

CASE III. *Conical Cornea.* Sarah Hanley, aged 24, a domestic servant, was admitted under Mr. Budd, December 13th, 1856, suffering from conical cornea in both eyes. She had been an out patient under Dr. Malden for five months, with symptoms of pulmonary tubercles. She was of fresh colour and delicate appearance; and for five years past had been in delicate health. Her sight had been gradually failing for about the same period. Her general health was much improved after the use of cod-liver oil and other tonics. In both eyes the cornea was very prominent, but perfectly clear and transparent; the pupils were rather dilated, and not in the centre of the irides, a much greater depth of iris existing below than above. Vision was very indistinct; she could see large print by holding it sideways, but not when directly in front, nor could she distinguish the beds in the ward beyond the distance of a few feet. The gutta percha instrument was used as in the preceding case, and worn for a fortnight without the slightest benefit, which is the more remarkable as, to all appearance, the cases corresponded very closely in other respects. No. 8 double concave glasses were found to afford very good sight for near objects, and also tolerable distant vision. She was supplied with these, and discharged on January 10th, 1857.

ST. GEORGE'S HOSPITAL.

TWO CASES OF ULCERATION OF THE STOMACH.

Under the care of J. A. WILSON, M.D.Oxon. With remarks by G. GODDARD ROGERS, M.D., Medical Registrar to the Hospital.

CASE I. J. C., aged 45, a labouring man, of temperate habits, was admitted 21st February, 1855, and gave the following history:—He had always worked hard, and had lived poorly of late. Six weeks ago he became troubled with occasional vomiting, and pain after taking food. Subsequently his breathing was short and oppressed, with slight cough, pain in the chest, and frequent headache. His face was flushed; skin hot; pulse 88, and rather full and hard. The tongue was much coated; the bowels constipated; and he passed very turbid and reddish urine, which depended for its appearance solely upon the presence of a large quantity of lithates. There was not the least pain or tenderness on pressure over the epigastric region; but he vomited after his first dinner, and spoke of a dull heavy pain at the stomach during the afternoon. Throughout the night he was extremely restless. A dose of calomel and colocynth, followed up by compound decoction of aloes, unloaded the bowels on the morning of the 22nd; after which he felt easier. He was ordered aromatic powder with bicarbonate of soda in scruple doses three times a day.

Feb. 24th. After supper last night he was very sick, and he also vomited immediately after taking his breakfast this morning. His pulse was now very weak; the skin felt cold and clammy; and he seemed scarcely to have energy to rise from his bed. Beef tea and port wine were given.

Feb. 26. He had severe headache all day, but no vomiting. In the evening, whilst attempting to go to the closet, he fell down from sheer exhaustion. He had been very restless all day, and great tremor of the hands was noticed by the nurse.

Feb. 27th. This morning he became delirious. His evacuations were passed involuntarily. His face was dusky, and severe dyspnœa came on about noon. Previously to this he had exhibited no urgent symptoms to call attention to the chest. However, when he was examined on the day of his admission, loud tubular breathing at the upper part of the left lung told of some consolidation, or more probably disorganisation from tubercle. During the day he took a large quantity of nourishment, and retained most of it upon his stomach. Towards morning, after another paroxysm of dyspnœa, he sank.

POST MORTEM EXAMINATION, thirty hours after death. A few old pleural adhesions existed on the left side. In the apex of the left lung a vomica was discovered, and a few miliary tubercles were scattered about the lungs. The heart was quite healthy. The stomach was distended with a large quantity of partially digested food, tinged of a deep yellow colour. On laying it open, the mucous membrane was found to be extensively ulcerated. The muscular coat was laid bare, and considerably hypertrophied. The ulceration was situated along nearly the whole length of the upper curvature, and encroached a little upon the anterior and posterior walls. The œsophageal

and pyloric orifices were not at all involved in the disease. The liver, spleen, and left kidney were healthy; but several cysts appeared upon the other kidney.

Case II. J. L., aged 56, a greengroeer, who worked hard and had had a good deal of mental worry, came into the Hospital on the 18th of April, 1855. He was in good health until eighteen months ago, when he began to experience occasional "twinges" of pain in his stomach, and during the past three months they had attacked him more frequently. A fortnight before his admission he vomited for the first time; and a week later he suffered incessantly from hiccough and eructations. He was pallid and emaciated; the bowels were confined; pulse small and thready; skin cold; and he was unable to lie down, owing to the constant eructation.

April 19th. At night he vomited nearly three quarts of thin watery fluid. A dose of aloes and senna was ordered for the morning; and then he commenced taking the nitrate of bismuth with magnesia.

April 20th. Very low spirited. The sickness returned at intervals. Brandy was ordered; and a blister put on the epigastrium.

April 24th. Somewhat easier. The vomiting ceased on the 22nd. An enema every evening kept the bowels gently open; whilst a few drops of chloroform added to the mixture acted almost magically in relieving the epigastric pain.

April 30th. He vomited a quantity of dirty blackish fluid. There was more singultus; the pulse was very weak; and in the afternoon he had two attacks of syncope. A creasote mixture was prescribed, and acetum cantharidis rubbed on the epigastrium. This relieved the pain, and he got some sleep; but on the following morning the sickness returned, and continued until midnight, when he sank from exhaustion.

At the examination, which was made thirty-six hours after death, all the thoracic viscera were found healthy. The stomach was large, and greatly distended, and its pyloric end was intimately adherent by old bands of lymph to the under surface of the liver; whilst the pancreas adhered to it behind. The contents were chiefly bloody grumous fluid. On laying it open, a large and deep ulcerated cavity was observed near the pylorus, about the size of a crown piece, and here the mucous and muscular coats were entirely destroyed. The adhesion of the pancreas alone prevented any communication between the cavity of the stomach and the sac of the peritoneum. The pyloric orifice was encroached upon by the ulceration, and the surrounding mucous lining was highly vascular. The whole of the muscular coat was thickened, especially around the pylorus; but *here* the thickening entirely depended upon chronic inflammation. All the other organs were healthy.

Remarks. Examples are here afforded of two very dissimilar predisposing causes of subacute inflammation in the mucous lining of the stomach: privation when the system required support amidst undue physical exertion, in the one case; in the other, mental anxiety and its consequent depression. If, according to Dr. Budd's theory, we regard the secretion of gastric juice as a reflex process which is sometimes excited, even in the absence of food, by mental emotion, and which may cause softening of the mucous membrane, it is fair to infer that long continued harass weakens the vitality of the stomach; that the gastric juice, in common with all other secretions, is vitiated; and that this twofold change renders the viscus obnoxious to any exciting cause of inflammation.

In the second case, where the greatest amount of mischief existed, vomiting did not come on until a late period: pain, however, had throughout been an urgent symptom. Its severity and long continuance arose from the extent of ulceration in the neighbourhood of the pylorus, where, necessarily, the food in its passage came in contact with a surface stripped of its protecting tissue.

The first patient was, indeed, not free from pain, but the situation of the ulcers rendered them less exposed to constant irritation from matters taken into the stomach. The short and hurried breathing no doubt arose from a desire to avoid the frequent descent of the diaphragm upon a tender part.

Cases in which a complete chain of ulcerations existed all along one or other of the curvatures used to be reckoned extremely rare; but a paper by Dr. Habershon in the last volume of *Guy's Hospital Reports* contains several instances. I cannot find any similar records of continuous ulceration along the greater curvature. It is somewhat remarkable that in Case II. traces of *inflammatory* thickening were found only about the pylorus. The state of the muscular coat in the other parts of the stomach appeared to be one of hypertrophy. This hypertrophy was general, and not limited to the pyloric extremity, as might have been supposed, owing to an impediment at the outlet, requiring increased muscular power to propel the food. I incline, therefore, to regard it as dependent upon *frequent irregular muscular contraction;* the result of implication of the sympathetic coronary plexus and the pneumogastric ramifications.

In Case I. even, where no obstruction existed at the pyloric outlet, there was general hypertrophy, probably from the same cause. That this notion is not far fetched, experiment and observation daily force upon our attention. Many cases of gastralgia, and supposed congestion of the liver, especially its left lobe, are now found to recover by the aid of nervine tonics; proving the immense, although obscure, influence of the nervous system upon the stomach. And this leads me to remark, in conclusion, that where it may be presumed from the history that superficial ulceration of the mucous coat is commencing, it would be well to give the nitrate of silver a more extensive trial than it has yet enjoyed.

Original Communications.

ON THE AIR-CELLS OF THE LUNGS.

By Thomas Williams, M.D., F.L.S., Physician to the Swansea Infirmary.

In common probably with many readers of the Journal, I have read with great interest the lectures of Dr. Edward Smith "On the Nature of Phthisis," recently published. If permitted, I will take the liberty to place before the author a few of the doubts which disturb my mind with reference even to the very groundwork of his theory.

1. It assumes as true that which is, by many very competent observers, strongly disputed, viz., that the air-cells of the lungs are lined by an epithelium. Upon the basis of this hypothesis he erects a graceful and airy fabric, itself remarkably fanciful. To this proceeding I object, that the truth and soundness of the *foundation* should first be placed beyond all doubt; in other words, I contend that that part of his general proposition should be presented *in limine* as an incontrovertible *certainty*. But of this portion of his theory Dr. Smith seems to have thought *the least*. In my article "On the Organs of Respiration" in the *Cyclopædia of Anatomy and Physiology*, I have adopted the view advocated by Schræder, Kölliker, and many of their pupils, in opposition to that so ably and originally enforced by Mr. Rainey. At that time, from careful observations which I had undertaken, I felt very confident that Mr. Rainey was wrong; subsequent researches have diminished that confidence, but only to such an extent as to impress me with the desire that the whole question should be again calmly and impartially examined. In the last number of Siebold and Kölliker's *Zeitschrift für Wissenchaftliche Zoologie* is contained, by Dr. Carl Semper of Altona, an able article on the air breathing gasteropoda, in which, in opposition to the results which I had published on the same subject, he labours with great care to prove that the lacunose network of blood channels which line the walls of the pulmonary sac of these molluscs, being the precise situations at which the respiratory process proceeds most actively, *are not lined with any epithelium whatever*, and that the epithelium is limited in its distribution to the course of the larger blood trunks.

In Müller's *Archiv* for 1853, Leydig, a very distinguished observer, states with great stress that in the fish, *cobitis fossilis*, "die Stelle des Darmes welcher die Athem-function zuertheilt ist *eines Epitels entbehrt, und vielleicht dürfte sich eine solche Verhältniss selbst bei den Lungen höherer Thiere nachweisen lassen.*" Such a statement proceeding from such an authority should at least command respect. Since the date of my article in Todd's *Cyclopædia*, I have worked probably as industriously as any anatomist on the subject of the special histology of the respiratory organs. The results of my researches will be given at length in the first part of my forthcoming work. I wish only at present to lament that Dr. Smith should vainly expend so much talent and energy upon the construction of a pathological theory, which founds itself upon a histological question still notoriously undecided. No competent judge will accept his views, unless he adduce *proof* that the *groundwork* is beyond dispute.

2. But let it be admitted that the air-cells are really lined by a layer of epithelia, Dr. Smith's doctrine as to the nature and

origin of phthisis still assumes as unquestionable that which is more and more doubted as the science of animal and vegetable morphology advances. The cell theory of Schleiden and Schwann is every day less and less implicitly received! If this theory should be demolished, Dr. Smith's hypothesis will "leave not a rack behind" to bear even a sepulchral witness to the credulity of its author! If Mr. Wenham's recently published views with reference to the mechanism of cell-formation should be confirmed by the march of discovery, Dr. Smith's hypothesis will become at once a "dissolving view!" If, by the progress of correct observation, the highly philosophical and probable opinions of Wedl in relation to cancer and its varieties should receive further support, Dr. Smith's speculations will lose at once all bodily form!

The preceding criticism I offer with the utmost respect. Dr. Smith is capable of better things than his "Theory of Phthisis." He may rest assured that his speculations will conduct him further and further away from *that* pathway of cautious induction, along which the correct thinker on such a subject as that on which he writes should even desire to travel. He seems very skilled in weaving one vision into another. But I think that any earnest student, who during the last few years has followed the current of discovery in organic chemistry, normal histology, and pathological morphology, will agree with me, that in the present remarkably transitional state of physiological and pathological knowledge, no living man can summon to his presence *adequate materials* for the construction of even a *probable* theory either of tuberculosis or cancer.

ON CHOLERA: ITS DIAGNOSIS AND TREATMENT.

By C. W. BELL, M.D., K.L.S., late Physician to H.M. Embassy in Persia, etc., Buxton, Derbyshire.

WEARY though most people are of the very name of cholera, it appears a duty to take advantage of the comparative immunity this country has enjoyed from that disease during the past year as a more favourable time for dispassionately considering the information we possess respecting it, than either while it is present, or its advent apprehended.

I have devoted much leisure to the perusal of recent contributions to the literature of the subject, as well as of works considered by the profession as authorities, and truly a less satisfactory course of reading could hardly be pointed out. So varied are the views adopted by different authors, that, though it was at first my intention to try to elicit truth by a process of exclusion, reviewing opinions and rejecting what appeared untenable or illogical, I soon became satisfied that no one would consent to wade through such a mass of inconsequential lucubration as this plan would have entailed upon the reader, or have the patience to inquire how conclusions the most opposite, arrived at by authors, according to the point of view from which their opportunities permitted them to survey the disease, were capable of being reconciled like the celebrated dispute of the two knights who each saw only one side of the shield. In many of these treatises, it might even be doubted, but for the title-page, whether we had not by mistake taken up a work on a totally different subject instead of one on cholera asphyxia, maligna, Asiatica, algida—for such are the recognised epithets bestowed on the disease in question. Upon the whole, therefore, it appeared the preferable course, as being the only one that would admit of the whole subject being brought within reasonable bounds, altogether to abstain from the citation of authorities, and to trust instead to the readers' knowledge of individual opinions when such are alluded to, and of the facts which I have made the basis of my argument.

A careful examination of the literature of cholera has satisfied me that more than one disease essentially distinct in nature, cause, course, and character, has been described under that name; and until this be fully admitted by the profession, we must despair of arriving at any settled conclusions with regard to its true nature and treatment. The evil that existed in 1831, when all Europe was turning with alarm to the East to watch the progress of the coming pestilence, still remains undiminished—we mean, the want of a definition of cholera: nor is it a definition only that is wanted, for strange and incredible as it may appear, there is not one single symptom, circumstance, or condition of the system, that all authors concur in describing as invariably present in an attack of this malady. It is a source of no small disappointment that no new light has been shed on this disease by the most recent work on the diseases of India (*Clinical Researches on Disease in India*, by Charles Morehead, M.D.: 1856); I had looked with eager expectation to its appearance, in the hope that the distinctions which I am about to attempt to draw from reason might there have been established by practical authority.

The nearest approach which I can find in all the various descriptions of the disease to agreement in noticing any single symptom as characteristic, is a kind of general admission of the existence of a remarkable condition of the circulation and of the blood in bad cases. It signifies little to my purpose that very different degrees of importance are attributed to this condition of the circulation in cholera, as a symptom, and that very different opinions are entertained as to its cause. It is much to be able to fix upon even one fact admitted by the majority as constant in this disease.

A review of the whole subject would justify the conclusion that this peculiarity consists not in primary poisoning or alteration of the blood, but in a species of paralysis of the powers which circulate the blood, and such a change in the action of the capillaries as respects nutrition, secretion, and the evolution of animal heat, as can only be referred to disorder or cessation of the agency which the sympathetic system of nerves is acknowledged to exert over these functions in health; but were we to attempt to go into the proof of this before the subject has first been disencumbered of those forms of disease which have been mistakenly described as cholera, we should only be plunging once more into that abyss of darkness and confusion we are so anxious to struggle out of.

Let us, then, in the first place, attempt to distinguish in the different maladies described as cholera all such symptoms as do not essentially belong to its purely congestive form which we regard as the type of the disease, and refer each of them to its true cause, in order that we may perfect our diagnosis, and clearly perceive the *rationale* of the treatment required in each several instance.

Almost all climates, but especially the more tropical, are liable to epidemics of diarrhœa, which attack very suddenly. These very often commence as hepatorrhœa (if the term be permitted), a copious pouring out of irritating bile. This in hot climates commonly induces inflammatory ulceration in the glands of the colon in the course of a few hours, and the case becomes one of confirmed dysentery. In this climate a similar hepatorrhœa, attacking as suddenly, is what we call English cholera; but here, instead of inducing dysentery, it generally passes off without mischief after the bile has been evacuated by plentiful vomiting and purging.

Of this nature, too, is a large proportion of the cases of diarrhœa which occur every autumn, and which in general attract very little attention; but if cholera of the true congestive type occur at the same season, all such attacks are then termed cases of premonitory diarrhœa; not because this condition necessarily, and in all cases, precedes cholera, but because a tendency to bowel complaint of any kind becomes in times when that disease breaks out epidemically, a predisposing cause of great power to induce an attack of algide cholera.

The fact is well known, that even slight attacks, such as at other times would be thought too trivial to require attention, are liable, if neglected, to be quickly followed by symptoms of fatal collapse when cholera is epidemic; but to cure this diarrhœa, and so guard the patient from becoming the subject of that epidemic influence, is quite a different matter from curing cholera. Too many people's ideas are governed by a name. The title of premonitory diarrhœa, given by authority to such affections, is considered by many to denote that such diarrhœa is an actual stage of cholera; and the practitioner who uses the term in that sense naturally concludes that in curing the purging with a little chalk, or lead and opium, he has cured a case of cholera. This is one of the greatest sources of error and confusion; for in the great majority of cases called "premonitory", the diarrhœa has in the first instance no connexion whatever with true cholera. The most ordinary means will arrest it; but this must be done at once, for if allowed to proceed, the disturbance of the circulation by excessive intestinal secretion, as well as that it produces on the whole sympathetic system, will very soon so invalidate vital resistance to the epidemic influence, that algide cholera is superinduced.

It is necessary here to observe, that cholera is not the only disease capable of being superinduced on simple diarrhœa. It is true that in this country we can hardly conceive the devastation suddenly spread over a whole district by the invasion of epidemic dysentery, to which the slightest disturbance of the bowels will then give rise; and we read of idiopathic peritonitis having been similarly epidemic, and its attacks connected with

intestinal derangement: but further illustration is unnecessary, for there are probably few medical men who have had extensive dispensary practice, or much to do with the poor in their own dwellings, who have not seen English cholera become dysentery; and that dysentery, in foul neighbourhoods, become highly contagious and endemic, in combination with putrid or typhoid fever. In these cases, there appears reason to believe that the disease is communicated almost entirely by means of the condensation of putrid particles in a state of great chemical activity, in water, milk, the saliva, or other fluid exposed to the effluvia of the exuvies; and that these particles, when imbibed, have the power of inducing the same putrefactive action in the mucus of the stomach and bowels, and of converting it into an irritant poison, producing effects like those of croton oil, and continually reproducing itself. This is a fact which the observations of Dr. Snow and his followers seem fully to have established. They have brought a vast amount of evidence together to show what a pregnant source of choleraic diarrhœa water is, when among other impurities it contains the smallest quantity of fæcal matter; or, more accurately, of intestinal mucus in a state of active decomposition. It would also appear probable from the same evidence that, where the choleraic atmosphere exists, such mucus is prone to assume an activity of putrescence not common at other times, or else that the emollient mucus of the bowels is then more than usually predisposed to be acted upon by a putrefactive excitor imbibed.* Be that as it may, however, there can be no doubt of the communicability of a putrid form of diarrhœa from the sick to the healthy, of which the following is an instance.

A woman, living in a cellar in Manchester, into which an open grid communicated with the drain, was attacked with diarrhœa; she died. Her daughter, then suffering, was sent into hospital; she too died, but introduced a most virulent diarrhœa into the ward, of which one of the women who lay in the bed next her died, and the other neighbour escaped only with life. The father at the same time, being crippled with rheumatism, was removed to the workhouse, where he died, and there also infected many with this putrid diarrhœa. In none of these cases was there the slightest symptom of an algide character. There was no Asiatic cholera prevalent that year. Had it been otherwise, probably every one attacked, as well those who recovered as those who died, would have sank into fatal collapse, and would have presented all the usual symptoms of the worst cases of cholera. The cases I have given, though of a more than usually virulent character, are by no means rare; and there is probably no filthy neighbourhood in the purlieus of a large town but can furnish similar instances of contagious diarrhœa every autumn.

It may seem unnecessary here to repeat that neither this putrid diarrhœa, nor some other kinds, however fatally they may predispose to collapse wherever algide cholera has appeared, are truly cholera; for they occur alike where cholera is, and where it is not, and multitudes recover or die without ever having exhibited a single symptom of that paralysed state of the circulation which is known as collapse, and is pathognomonic of algide cholera. These facts, however, only render it the more incumbent on us to study with care the source and *ratio medendi* of any prevailing tendency to diarrhœa whatever, that may exist where cholera declares itself, in order that by warding off this powerful source of debility from the sympathetic system, we may preserve sufficient nervous energy to resist the influence of the epidemic to which continued purging would otherwise so powerfully predispose it to succumb. Thus a practitioner in the tropics, who has mostly to deal with bilious diarrhœa, trusts to calomel and opium as his sheet anchor, and with it, he conceives, he cures the cholera; the same treatment answers very well in this country when cholera breaks out in the autumnal months; still even its champions allow that mercury has appeared in some instances to have brought on, rather than to have warded off, algide symptoms; and that, however successful the practice in general is, there do occur cases in which it does no good, and where in spite of its fullest exhibition the mildest attacks have ended fatally. Some have confidence only in sugar of lead and opium, but the same complaints are made of it as of calomel, that it is inapplicable where there is no purging (that is to say, in the purely congestive form), and does not suit every epidemic of the disease equally well.

Some authors who have mainly had to do with the putrid diarrhœa occurring in the purlieus of large towns, or in neighbourhoods supplied with impure water, have described that disease as cholera, into which since 1831 it has frequently lapsed. It has been found that deluging the bowels with castor oil cures this complaint, and the superinduced symptoms of algide cholera often disappear on the cessation of the diarrhœa; an attentive perusal, however, of the fatal cases, in which the failure of the remedy is attributed to the carelessness of the nurse, will convince the reader that these were of a totally different nature from those in which the medicine proved effectual. This is the form of diarrhœa which is often termed in India village cholera, as being engendered by filth, and distinguished by its prolonged premonitory character and apparent contagiousness, from the rapid congestive form generally met with on a march, and it is that which European authors mainly treat of as breaking out in densely peopled towns and villages. Its putrid origin requires an antiseptic treatment, and there is scarcely a substance of that nature that has not been extolled as a panacea for a time, *e. g.*, dilute sulphuric acid, nitric acid, nitrate of silver, the oxides of almost all the metals, finely powdered charcoal of peat or soft woods, aromatic gums and essential oils, have all been vaunted for their efficacy; we find, however, that the majority of cases cured by such means had never reached the stage of collapse, or had so slightly succumbed to that influence as to throw it off so soon as the diarrhœa was cured. On the other hand, we read in almost every work on the subject, of isolated cases so virulent that they sank into collapse at once without having had diarrhœa at all, or perhaps only a single purging.

Among the various kinds of diarrhœa which may prevail contemporaneously with epidemic cholera, there is one which it is particularly necessary to distinguish from those produced by bilious derangement or arising from foul water, because it is in fact *true cholera*, and will be materially aggravated by calomel and opium, will be in noways benefited by antiseptics, whereas drastic purgatives would be almost certain to convert this mild attack into fatal congestion. This may be called intermittent diarrhœa, a painless purging of a colourless, inodorous fluid, lasting for an hour or two each day, then ceasing till the same hour on the day following. This form is frequently to be remarked as preceding an epidemic of cholera by a few weeks, but never met with unless that disease be actually present or in the neighbourhood. This kind of purging sometimes goes on for a week or more, but it is rare for it to continue for more than three days without being attended with some more serious symptom. The appearance of the patient when the hour of attack approaches is characteristic. The eyes sunk, the lips livid, the nails purple, with an aguish streak upon them; the veins of the backs of the hands contracted like ink lines traced with a pen; and the tongue perfectly clean and pale, as if macerated. The dejections are unaccompanied with pain or griping. The urine is commonly scanty and of a dark porter-like colour, and pressure over the spleen causes pain.

A few doses of a grain or two of quinine and sulphate of iron arrest this at once, and the medicine is felt to be grateful to the whole system; whereas in the bilious and putrid forms of diarrhœa such a dose would prove both nauseous and injurious. But it may be asked, granting the importance of distinguishing between these three kinds of diarrhœa (and as many more as may be), in order to enable us to treat them so as most effectually to prevent the accession of algide symptoms, what after all is the difference between them *after* the algide symptoms have commenced? In all of them the lips are then livid, the eyes sunk, the nails blue, the pulse feeble or imperceptible, the extremities like wet leather, and they suffer more or less from cramps. Is there any essential difference in these apparently identical cases *now*, such as to require different treatment? And if so, how are the cases to be distinguished from one another after having reached this stage? This is, in fact, the material point in question; for if such a difference in symptoms can be distinguished as to imply the necessity for totally different treatment, the enigma which Asiatic cholera has everywhere presented to those who have written upon it, or tried to comprehend its nature or its cure, will be solved.

With respect to the putrid dysentery, after algide symptoms have commenced, there is no difficulty whatsoever in distinguishing it by the smell alone; for, on turning down the bedclothes, the nose is assailed with the most sickening odour of bad size or putrid soup—not at all feculent in smell, but pecu-

* The effects of putrefactive excitors on the secretions of various membranes, converting them into irritants and sources of inflammation of the membranes—*e. g.*, of the urethra, conjunctiva, nares, mouth, intestines, the pleura or peritoneum, or the lining membrane of the veins—which is probably the true source of what Hunter calls continuous sympathy, requires investigation by those who study the "principles of medicine". (*Vide* the latter part of Dr. Bell's "Address in Medicine".—Prov. Med. and Surg. Trans., 1850, vol. xvii.)

liar, and never to be forgotten. The purging is an incessant squirting of this foul fluid. If any doubt exist, let a dose of quinine and iron be given, and the disgust expressed will attest the nature of the attack. The other diagnostic signs are, that there is always some fur on the tongue, the pulse is generally perceptible, and the heart's action very rapid and feeble; not convulsively struggling and churning as in congestive cholera. Add to this that some urine is generally secreted, the extremities are not so cold as in the congestive disease, nor does the same amount of warmth return to them when death takes place. The previous history of the attack is, that the patient has been purged perhaps a dozen times within a few hours; at first the tongue was red and much furred, the mouth hot, the skin warm, the pulse above a hundred and sharp; then sickness came on and cramps, the skin grew cold and damp, and, exhausted by continued purging, he has fallen into the state of collapse.

It is, in the first place, of importance here to remark, that there is nothing of that oppression of the heart's action by excess of blood on the right side, and deficiency of it on the left, which to relieve is to cure, in the congestive form of cholera.

The continued purging, which is here a secretion, not an exudation, prevents that overdistension of the great venous trunks of the cava and portal system taking place, which obstructs secretion. In short, it is not venous congestion and paralysis of action in the capillaries that we have to contend with here, but a draining away of the life by the quantity of fluid poured into the bowels under the influence of the putrid irritant into which the whole of the mucus of the intestines has been converted. It is in vain that we here attack the algide symptoms, for even were we successful in restoring animal heat, etc., the *cause* remains; and as long as mucus continues to be secreted into the bowels, the purging will continue unless the putrefactive action be arrested.

It seems probable that large draughts of finely powdered peat charcoal in water will ultimately be found the best cure for this malady. Dr. Johnson uses castor oil, which answers very well if repeated sufficiently perseveringly to evacuate the decomposing mucus as quickly as it is formed. Tartar emetic in combination with calomel answers very well, or calomel alone in repeated doses, where it acts both directly as an antiseptic and in the same purgative way as castor oil. Dilute sulphuric acid drink is purely antiseptic in its operations; so is salt; and cases are mentioned where an immense draught of spirits has cured. If by any of these means the putrescent action is arrested and the purging stopped, warmth gradually returns to the surface, and the algide symptoms disappear.

It may be observed, that correct diagnosis alone can direct the cure here, for to attempt this by the means which afford the greatest relief to patients suffering from the congestive or true form of the disease only aggravates; and indeed the expression of disgust and horror exhibited by patients in the algide state of cholera induced by putrid diarrhœa when offered a second dose of solution of quinine and iron, is in perfect contrast to the thankfulness with which a similar dose is swallowed by one in the congestive stage of true cholera.

Of the bilious form of diarrhœa after algide symptoms have been superinduced, I find innumerable cases cited by Indian authorities, for example, Twining, Parkes, and others. In the first stage the attack is identical with that which, were cholera absent, would turn to dysentery; and most of the protracted cases exhibit dysenteric symptoms, if the algide stage be recovered from, along with remittent or so-called consecutive fever. Here there is no very leading symptom, unless it be the presence of a very little fur on the tongue, which is never seen in pure congestive cholera, and the absence of putrid odour on throwing down the bedclothes. The purging is very considerable in quantity, generally colourless and without smell, save when occasionally it contains bile. The treatment here is strictly that applicable to acute dysentery: calomel and opium, ipecacuanha, sugar of lead and opium, etc. Mere antiseptics, like dilute sulphuric acid, do no good; and the draught of quinine and iron, though not producing the intensity of disgust that it does in cases of putrid diarrhœa, is disagreeable to the patient, and is attended with none of the sensations of comfort and relief afforded by its exhibition in purely congestive cholera. In these cases all the adjuncts of treatment by hot air baths, stimulants, etc., may be found of value which in true congestive cholera are exactly the reverse: perhaps where the distinction is otherwise difficult, the tolerance of warm applications in the one case, and their extreme intolerance in the other, might serve as a test.

This is all that it has appeared necessary to premise respecting the diseases, which, though distinct from cholera in their essence, most frequently lead into it. Practically, they may perhaps be deemed of even greater importance than the unmixed congestive or primary disease, as being numerically more fatal.

[*To be continued.*]

ON A POSSIBLE CAUSE OF THE FIRST SOUND OF THE HEART.

By JOHN COCKLE, A.M., M.D.

I HAVE frequently meditated upon the assertion of Bartholini, made in his *Anatomy*, published in 1673, page 379, that the ligation of the venæ cavæ arrested the action of the heart. He writes: "Unico experimento fidem assertione facio, si vinculo intercipiantur vasa cordis adferentia motus cordis desinit, reliquusque erit undulans tantum motus et palpitatio, soluta ligatura motum recipit. Recentiores curiosi novo experimento nos confirmant."

Haller (*Observation sur la Cause du Mouvement du Cœur*, 1751), in repeating this experiment, found, that unless the cavæ were opened, and the right auricle emptied, the motion of the heart was not always arrested, but that with the precaution indicated the experiment was always successful.

These experiments then, in warm-blooded animals, fully demonstrate the presence of blood in the auricle to be the *sine quâ non* of the heart's perfect systolic and diastolic motion.

Dr. Halford has more recently shown, by well devised experiment, that if the cavæ are compressed, although the heart's action continues vigorous, yet upon the application of the stethoscope "no sound whatever is heard."

I venture to suggest, therefore, taking these experiments as a basis, supported by others of my own, which I shall make the subject of a future paper, that the first sound may be principally produced in the following manner. During, at least, part of the time of the ventricular systole, the auriculo-ventricular valves are closed by the pressure of the column of blood impelled against them; but by the time the valves are brought to the plane of closure, the dilating auricles have allowed the blood streaming from the cavæ and pulmonary veins to form a layer upon the upper surface of the valves; and it is, I conceive, by the reaction of the lower column of blood upon the superimposed layer, the valve intervening, that the special character of the first sound is produced. The modifications of the sound, in part, depending upon the varying quantity of blood entering the cavity of the auricles.

63, Brook Street, Grosvenor Square, January 24th, 1857.

Inventions and Appliances

RELATIVE TO

MEDICINE AND SURGERY.

BOURJEAURD'S ELASTIC APPARATUS.

THE difficulty of applying pressure, when required, to any part of the body, in such a way that it shall fully effect the object desired, without either positively or negatively doing mischief either to the parts under treatment or to those in their vicinity, has long been a source of annoyance to surgeons. Hence systematic writers on surgery are accustomed to lay down precise instructions as to the mode of bandaging a limb; and, in medical schools, a special course of instruction on this important branch of surgical practice is sometimes given.

In recent years, surgeons and mechanicians have endeavoured to make application of the elastic property of certain substances in this direction, and especially of caoutchouc or India rubber. Of those who have devoted their attention to this subject, Mr. BOURJEAURD holds the most prominent position, and has contrived a number of elastic appliances which, although they may, on further experience, be found capable of improvement in some of their details, yet far surpass in efficiency and safety the means formerly in use. It is right here to state, that Mr. Bourjeaurd has the advantage of not being a mere amateur mechanician; he is, in fact, a member of the

medical profession, having formerly served as surgeon in the French marine; and hence may be supposed to possess a competent knowledge of the anatomical requirements of the part with which he has to deal.

We doubt not that Mr. Bourjeaurd's appliances are too well known to require that their merits should be specially set forth. They have, we are aware, been employed by many surgeons and obstetricians, and have been proved productive of comfort to the patient, and of satisfaction to the practitioner. From a special report, presented last year to the Surgical Society of Paris by MM. Alphonse Guérin, Larrey, and Deguise *fils*, some extracts may be made, as showing the opinion of that learned body on the inventions of Mr. Bourjeaurd. After giving a brief description of the apparatus, the reporters say:

"We do not agree in the objection of the author to the ordinary trusses. When these are properly applied, and when the strength and the size of the pad are in proportion to the size of the hernia and of the orifice of the ring, they may keep up a hernia in the great majority of cases. We recognise their efficacy; but we do not deny that the pressure they exert may become painful. There is probably none of us who has not seen at the Central Bureau, where the patients may be supposed not to be endowed with excessive sensibility, some of the numerous hernia patients, who appear twice a week, leaving off their trusses rather than endure the pain produced by the pressure. This pressure is not only exerted on the skin; the subcutaneous areolar tissue is at last absorbed, and this renders it more and more painful to keep the truss on. Besides, the closely fitting dress of men does not hide the ordinary truss—an index of an infirmity which they would prefer to keep secret. You will at once understand that the bandage of Mr. Bourjeaurd is preferable to those which we have hitherto employed.

"Examining the question in a more elevated and more correct point of view than that of mechanicians, Mr. Bourjeaurd lays down the principle that it is necessary not merely to press on the aperture through which the hernia passes, but also to support the mass of the intestines. The abdominal aponeuroses being incompetent, in persons affected with hernia, to retain the intestines in the normal cavity of the abdomen, Mr. Bourjeaurd supplies the defect by means of an elastic girdle, applied equally over the skin, so as in some measure to form one body with it.

"This girdle, Mr. Bourjeaurd says, will fulfil its object only when applied from below upwards—from the pubes to the umbilicus. This is a condition indispensable to every compressary apparatus, whether it be applied to varicose veins, to hernia, or to a displaced uterus. All compression not founded on this principle is essentially faulty; and hence all laced stockings and bandages scarcely ever fail of aggravating the evil which they are intended to relieve. . . . .

"I could," says M. Guérin, "cite a large number of instances in which the ordinary trusses were insufficient, either because the large size of the abdomen prevented them from remaining in place, or because the patients could not bear the pressure, but in which the herniæ have been admirably supported by the apparatus of Mr. Bourjeaurd.

"Before being called on for this report, I" (M. Guérin) "had several times performed Gerdy's operation for the radical cure of inguinal hernia. After recovery, I had applied an ordinary truss; but I had observed that the absorption produced in the parts pressed on did not conduce to diminish the probabilities of a relapse; but Mr. Bourjeaurd's belt, exercising a gentle pressure on the perineal orifice, seemed to me to admirably fulfil the indications required in the year following the operation. Some months ago, I performed the operation on a young man; and I am convinced that Mr. Bourjeaurd's belt, without causing the least inconvenience to the patient, will contribute powerfully to prevent the reproduction of the hernia, by allowing the process of obliteration to go on in the ring, instead of causing removal of the plastic lymph by excessive pressure.

"In no case has this hernia bandage failed; the patients have always expressed the comfort they have felt from its application. Nothing betrays its presence through the most closely fitting garments."

MM. Larrey, Huguier, Robert, and Gosselin, when the report was presented, also spoke favourably, from experience, of the appliances of Mr. Bourjeaurd.

WILLIAMS AND SON'S GLYCERINE SOAP.

While we confess not to have made a comparative examination of all the preparations sold under the name of glycerine soap, we can safely recommend the soap prepared by Messrs. Williams and Son, as possessing in a remarkable degree the property of softness and freedom from irritation—qualities especially indispensable to applications to tender or diseased skin. The soap has been analysed by Professors Hofmann and Redwood; and the following is the statement made by these chemists.

"We have obtained the following results:—

"Fatty and resinous acids	71·2
Soda	6·2
Sulphuric acid	·4
Chlorine	·25
Glycerine	5·45
Water	16·5
	100·00

"The peculiar features of this soap, as indicated by the analysis, are, the presence of a considerable quantity of glycerine, the almost entire absence of common salt or other saline matter, and the reduction of the alkali to the smallest amount available for the formation of a perfect soap."

The glycerine soap has been spoken of with praise by several medical men who have observed its effects in diseases of the skin; and it would, in our opinion, be a valuable article of daily use in the nursery.

Periscope.

EPIDEMIOLOGY, HYGIENICS, AND STATISTICS.

PROTECTIVE AND MODIFYING POWERS OF VACCINATION.

A carefully prepared paper on the protective power of vaccination, read by Dr. E. C. Seaton before the Western Medical and Surgical Society, is published in the *Journal of Public Health* for the present month. Although there can be but few who have any doubt of the universal benefits conferred by efficient vaccination, yet when an endeavour is being made to render these benefits still more extensive, a labour such as Dr. Seaton has undertaken is far from being a work of supererogation. Subjoined are some portions of the article to which we refer.

Dr. Seaton shews that the doctrine of infallible prevention of small-pox by vaccination, attributed to Jenner, was never held by that distinguished man: what he said was, that vaccination, duly and efficiently performed, would protect the constitution from subsequent attacks of small-pox as much as that disease itself would. He did not expect it to do more; and he believed it would not do less. Dr. Seaton observes, that the question whether vaccination is capable of utterly exterminating small-pox can only be decided when the practice shall have become universal.

It is greatly to be lamented, the author observes, that the rules and precautions which Jenner laid down with so much care and precision, for the performance of vaccination, should have been in so many instances neglected or departed from; and that, from the very simplicity of the operation, it should not always have received that attention to which it was entitled. Had this not been so, we should at all events have been free from the difficulty arising from the necessity of determining, in cases in which vaccination is said to have failed, whether there has really been effective vaccination or not. It is not the insertion of lymph into the arm, nor the production merely of a vesicle, which constitutes vaccination: *the vesicles to be produced must have a specific character, and go through a definite course, indicative of a particular constitutional affection: and it is only when this character is perfect, and this definite course has been normally gone through, that there is protection;* or at all events a full measure of protection.

That efficient vaccination will protect the system against an attack of small-pox absolutely as a rule, even under circum-

stances of the severest exposure, is well known. It is equally certain that small-pox will sometimes occur after the most perfect vaccination; that it will occur with much greater frequency after spurious or imperfect vaccination; and that it may be met with in those who have already had the disease casually or by inoculation. But when we strive to determine and compare the ratio in which individuals, protected by vaccination, perfect or imperfect, and those protected by casual or by inoculated small-pox, are liable to take small-pox subsequently, we find the greatest possible difficulty. For this comparison we need, in the first place, that the inquiry should be made on a sufficient number of individuals similarly circumstanced as to age, condition of life, various external circumstances, and liability to exposure: where vaccination is alleged, we have to determine whether there has been real vaccination or not: and where small-pox is alleged, we have to determine that it was this disease which really had been gone through. Then, as regards the alleged small-pox occurring after such vaccination or previous small-pox, we have to be certain that we have really before us a case of variola, and not one of those many affections which have at times been mistaken for it. Such an inquiry as this can only be instituted with regard to particular classes of individuals; and as regards children under puberty, the inquiry has been made under circumstances which admit of every confidence being placed in the result.

Every boy admitted into the Royal Military Asylum at Chelsea, not bearing satisfactory marks of small-pox or cow-pox, is vaccinated. Of 5,774 boys admitted from the opening of the establishment in 1803, to December 31, 1851, 1,950 had on admission marks of small-pox, and 3,824 had either marks of vaccination, or were on admission vaccinated. Of the 1,950, twelve, or 6·15 per 1,000, had small-pox subsequently; of the 3,824, twenty-seven, or 7·06 per 1,000, had small-pox subsequently. (Dr. T. G. Balfour, in *Medico-Chirurgical Transactions*, vol. xxxv.) The result of the comparison here shews that as regards children under puberty there is scarcely any difference in protective value between cow-pox and previous small-pox, and so far the opinion of Jenner is entirely confirmed. The experience of this asylum places beyond all doubt that the recurrence of small-pox, or its occurrence after inoculation, is by no means the very rare thing it has been represented by some to be. We read statements of a vague estimate by De La Condamine that the cases which so occur are not more than one in 10,000, and we are even told to look upon this as exaggerated; but here is an example in which out of every 1,000 more than six have had a second attack in a population certainly not peculiarly exposed to infection, and before any have reached the age of manhood.

The comparison we have made in the case of the Royal Military Asylum between the protection of vaccination and that of previous small-pox is complete as far as it goes; but it unfortunately stops short at the period of life when the protection of vaccination is said by some to begin to wear out, that is to say, the age of puberty. Now the army gives a class of men, all of whom have passed this period of life, and all of whom by the rules of the service, should be, and we presume are, protected. About 78 per cent. are protected by vaccination, and the remaining 22 per cent. by previous small-pox. In a force so protected and in many instances, as Dr. Balfour has shown, considerably exposed to small-pox, the annual ratio of cases has not been greater than sixty-six to every 100,000 men, or rather more than half a case per 1,000 men.

In the navy, by the rules of which service also all should be protected, there is the same general testimony to the protecting value of vaccination. In this force the cases are slightly more numerous, having been 417 on an aggregate strength of 363,370 men, or rather more than 1 (1·148) per 1,000. This increase over the ratio prevailing in the army (115 per 100,000 as against 66 per 100,000) Dr. Balfour attributes to the crowding on shipboard, and the consequent difficulty of separating the healthy from the sick. Doubtless these causes would so operate; but on the other hand it is probable that sailors, though often considerably exposed, are less so on the whole than soldiers, who are frequently quartered for long periods together in large towns; and Dr. Seaton does not doubt that the real explanation is that the rules of the service are not so well carried out, for many obvious reasons, amongst them as in the army. In looking over the returns from the particular ships in which small-pox had appeared, he finds it stated expressly in some cases that there had been *no* protection, and in others that it is doubtful whether there had been protection or not. Even in the army it is probable there are some unprotected, especially on colonial stations. Inspector-General Dr. John Davy states that it is only by the strictest superintendence, and by returns at short intervals, that thorough vaccination can be kept up.

To understand the full value of these facts, it is desirable to compare them with the results ascertained in the Royal Military Asylum. It appears that the proportion of attacks from small-pox for every 100,000 individuals is among the soldiers, 66; among the sailors, 115; among the boys, 123. The immunity therefore is absolutely greater among the soldiers and sailors than it is among the boys.

What is the degree of immunity afforded by vaccination under circumstances of long continued and frequent exposure during epidemic influence? These are the conditions under which the greater number of failures undoubtedly occur; and it is precisely under these conditions that without protection *scarcely one* escapes. There are not observations sufficiently accurate or numerous to justify positive conclusions: but some interesting facts have been observed. During an epidemic in Chelsea in 1838-9, Mr. Marshall (*Lancet*, vol. xxxvi) inquired into the circumstances affecting 757 members of families in each of which there had been at least one case (generally a fatal one), implying, in almost every instance, a case in the room which they inhabited. Of the 757 there were only 231 reputed to be vaccinated; of this number twenty-seven only suffered from small-pox, while of the remainder every one, who had not had previous variola, had small-pox on the occasion of this epidemic, except seven. It occurred to the Epidemiological Society some time ago, that valuable information might be acquired by ascertaining the protection, which medical men themselves experienced from these two methods. Accordingly it has been ascertained that, out of 347 medical men protected by vaccination, there were 44, or 12·6 per cent., who had had variola subsequently; and out of 82 who had been inoculated n their infancy, there were 3, or 3·6 per cent., who had subsequently small-pox.

Of the 347 persons there were, having

	Number.	Attacked.	Per Cent.
No cicatrix visible	18	3	16·6
One cicatrix	62	7	
Two cicatrices	173	26	14·0
Three cicatrices	36	1	
Four cicatrices	20	1	3·2
Six cicatrices	6	0	
No mention	32	6	

Of those in whom the cicatrices are mentioned as good, there were with

	Number.	Attacked.	Per Cent.
One cicatrix	48	5	
Two cicatrices	158	21	12·0
Three cicatrices	34	1	
Four cicatrices	17	1	3·5
Six cicatrices	6	0	

Taking these facts in connection with the immense value of the cicatrices as an index of the efficiency of vaccination, they are certainly sufficiently remarkable: so far as they may be trusted to, the liability to take small-pox, in persons having more than two cicatrices of vaccination, is no greater than to take small-pox after previous small-pox: and if the observations are too few, as they undoubtedly are, to justify our drawing any positive conclusion to this effect, they require us at least to pause and to call for more facts before we acquiesce in an opposite conclusion, or admit that, duly and efficiently performed, vaccination will not protect the system, as Jenner stated, to the same extent that inoculation itself would have done.

It is a confirmation of this, that, during seventeen years, not one of the servants or nurses of the Small Pox Hospital has been attacked by small-pox, though vaccination has been the only protection of many of them.

From the facts which he has collected so far, Dr. Seaton draws the following conclusions:

1. It would seem that there is no important difference between the protecting power of variola and vaccinia during childhood, under circumstances of ordinary exposure: with regard to severe exposure, there are not facts to determine one way or the other.

2. There are not facts to determine the relative protecting power of variola and vaccination in adults under ordinary exposure; but there are abundant proofs of the enormous amount of protection afforded by vaccinia.

3. Adults severely exposed, relying on what is ordinarily termed vaccination, will probably take small-pox, though, as we shall see immediately, of a modified kind, in a greater ratio

than those having previously had small-pox, by inoculation: but—

4. If the vaccination has been thorough and efficient, it is extremely probable that the liability to small-pox under severe exposure is no greater than after inoculation.

5. Those statements, therefore, are entirely without foundation, which speak of small-pox after inoculation as a risk hardly exceeding a possibility, and never to be taken into account: while small-pox after vaccination is represented as a thing of daily and constant occurrence.

6. The representation that the protection of vaccination gradually wears out, till at length it leaves the system as liable to attack as though the protection had never been imparted, is not only unproved, but is opposed to important facts, and in all probability will turn out to be unfounded.

7. There is, however, a great proclivity to small-pox, whether natural or after vaccination, between the ages of fifteen and twenty-five,—a circumstance which will account for many of the facts, which have been cited as proof of the non-durability of the vaccine protective power.

The remarkable power of vaccination in modifying the course of an attack of small-pox, and in thus diminishing the fatality of the disease, is well known, and admits of being estimated with very considerable precision. Of 2,654 cases of natural small-pox admitted into the Small-Pox Hospital in sixteen years, in only sixty-nine was the eruption irregular or modified, and of the remaining 2,585, in 1,821 it was confluent; while of 3,094 cases reputed to be vaccinated it was modified in 2,149, and of the 945, in which the course was unmodified, there were but 570 confluent cases, 138 of which were in persons simply stated to have been vaccinated, but having no mark whatever, and 275 in persons having but one cicatrix. In various epidemics recorded by writers, and in others communicated to the Epidemiological Society, the result has been the same.

The returns from the Small-Pox Hospital give the following results:

	Cases.	Deaths.	Per Cent.
Natural small-pox	2654	996	35·55
Secondary ditto ditto	47	9	18·9
Small-pox after vaccination	3094	208	6·76

The ratio of mortality in the Small-Pox Hospital is high, both as regards natural small-pox and small-pox after vaccination; much greater than prevails in communities at large even under epidemical influence, from circumstances which must be obvious. In the first place, the severer cases are those naturally sent to a hospital, the milder being kept at home; or if milder are presented when the hospital is full, the severer are taken in in preference: in the next place, there are hospital diseases, as gangrene, erysipelas, and the like, to which the patient would not have been subjected at home: and lastly, there is a hospital influence, arising from the collecting together patients all infected with such a disease as small-pox, and which, independently of the production of any special superadded disease, aggravates mortality. So it happens that, allowance being made made for the superadded diseases, the mortality is still in advance of what occurs elsewhere. From the 268 deaths occurring after vaccination, Mr. Marson calculates that sixty-three should be deducted on account of superadded disease, and the rate per cent. of mortality then remaining will be 6·76 per cent. While the mortality in all reputed to have been vaccinated was 6·76 per cent., in those who were *merely stated* to have been vaccinated, but had no mark to show, it was 21·73 per cent.; and it is important to remark, that the statement which was relied on here was always a clear one, either from the patient's own recollection, or from the account of his or her friends, and their belief that it had taken effect properly, In those with cicatrices it was as follows:

		Mortality Per Cent.	Mortality Per Cent.
One vaccine cicatrix:	Well marked	4·13	7·57
,, ,,	Badly marked	11·95	
Two vaccine cicatrices:	Well marked	2·68	4·13
,, ,,	Badly marked	7·29	
Three vaccine cicatrices:	Well marked	1·63	1·85
,, ,,	Badly marked	2·32	
Four vaccine cicatrices:	Well marked	0·99	0·74
,, ,,	Badly marked	0·00	
Total mortality:	With good cicatrices		3·04
,,	With bad cicatrices		9·77
,,	With one and two cicatrices		6·21
,,	With three, four, & more cicatrices		1·30

This table, in the first place, shows how many there are who consider themselves vaccinated, and in whom lymph has undoubtedly been inserted (and in most instances, probably, with some local result), and yet who have next to no protection at all. They have been vaccinated in the popular sense of the term, *but they have never gone through the vaccine disease:* and of such Jenner held and taught that they were unprotected; and yet cases and deaths, such as these, are made to swell the lists of failures of vaccination. In the same way, in an epidemic in Ceylon, in 1830, out of 64 cases with no marks there were 18 deaths; of 69 with bad marks, unlike those of proper vaccination, there were 15 deaths; but of 127 with characteristic marks, but one death. In the same way again, in an epidemic in the same island, 1833-4, in 83 cases with no marks, or bad marks, there were 19 deaths; but in 111 with good marks, only two deaths.

The table further shows, in a most striking way, the wonderful modifying power of thoroughly efficient vaccination—the mortality in those vaccinated, and having four cicatrices, being less than one per cent. under the same circumstances, under which the mortality from natural small-pox is above 35 per cent.

Before referring to the change which has been induced in the mortality of mankind from small-pox, since vaccination was introduced, Dr. Seaton observes that the facts brought forward seem clearly to establish that vaccination is greatly to be preferred to the old process of inoculation. Vaccination involves no risk to life; and the chance is small (taking the population throughout under ordinary circumstances) that a vaccinated person will take small-pox at all, and very small, having taken it, he would die. But the process of inoculation itself kills outright, some of its advocates say five, and some three, of every thousand submitted to it: and for the survivors it has yet to be proved, that the protection they enjoy is greater than that afforded by vaccination. Of 1,000 children vaccinated in infancy, it would be an extravagant supposition that fifty should ever take small-pox afterwards; and of these fifty, how many would die? According to the vaccination, as we generally have it, not more than one and a half: but if the vaccination be thorough, as Mr. Marson has shown, the deaths would be less than a third even of this number. That is to say, on the extravagant hypothesis that 5 per cent. of all *vaccinated* should take small-pox, there would not be more than one in 2,000 vaccinated who would die of small-pox at any period of their lives; whilst of 2,000 *inoculated*, six or ten might be expected to die, as the result of the operation itself.

While vaccination has incontestable advantages over inoculation, as regards the individual, there are other considerations which still more emphatically recommend the former practice, while they render the latter, independently of any legal prohibition, and under all circumstances where vaccine lymph is attainable, little short of criminal. The inoculated small-pox is capable, like the natural disease, of being imparted from individual to individual; and thus each inoculated person becomes a focus of contagion. In this way, during those times in which inoculation prevailed, the small-pox was constantly communicated. No fewer than twenty-three instances are given by correspondents of the Epidemiological Society, in which districts free from small-pox were infected, and the infection clearly traced to an inoculated case. This was previously to the prohibition of inoculation in England. The same practice, though prohibited, goes on in Ireland at the present time with disastrous results (*Census for Ireland for* 1851, part v, vol. i); and it is pointed out by the Commissioners of Inquiry appointed by the Government in India, as one of the great causes of the diffusion of small-pox (*Report of the Small-Pox Commissioners, etc.* Calcutta: 1850). Hence, when inoculation was in vogue in England, there was no diminution, but rather an increase, in the mortality from small-pox; while, since the introduction of vaccination, there has been a diminution progressing year by year, as vaccination has become more and more diffused.

During the latter half of the last century, when inoculation was practised, the mortality from small-pox, in proportion to the mortality from all causes, was for the—

	Per 1,000.
Ten years ending 1760	100
,, ,, 1770	108
,, ,, 1780	98
,, ,, 1790	87
,, ,, 1800	88

While the proportion subsequent to the introduction of vaccination was, for the—

Ten years ending	1810 . . .	64
" "	1820 . . .	42
" "	1830 . . .	32
" "	1840 . . .	23
" "	1850 . . .	16

In foreign countries, the proportion of deaths from small-pox has fallen from sixty-five in the thousand, which it was during the period of inoculation, to seven in the thousand, which it is now, taking the average of a great variety of countries and a long series of years.

The same fact may be illustrated in another way:—For the ten years ending 1800, the average annual mortality from small-pox, within the Bills of Mortality, on a population ascertained in 1801 to be 261,233, was 1780. Immediately on the introduction of vaccination, this mortality began to decline. When the Registrar-General's office was established in 1837, a thoroughly trustworthy source of information on the causes of mortality was opened; and from this authority we find that the average annual deaths from small-pox in four years, ending 1841, on the metropolitan population, ascertained in 1841 to be 1,948,369, were only 1659; and this includes the year 1838, a year of most remarkable small-pox mortality. In 1841, the Act was passed providing public vaccination in every union, with the result, that the average annual deaths from small-pox in fourteen years, ending 1855, on the metropolitan population, ascertained in 1851 to be 2,373,799, were further reduced to 821.

We thus have the following results:—

	Population.	Aver. annual loss from small-pox.
Ten years ending 1800 . . .	261,233	1780
Four years ending 1841 .	1,948,369	1659
Fourteen years ending 1855 .	2,373,799	821

Dr. Lettsom and Sir G. Blane arrived at the conclusion, that the annual mortality in Great Britain and Ireland from small-pox was, during the last thirty years of last century, about 35,000. The whole population of Great Britain and Ireland was greatly less than that of England and Wales is at this present time: yet the average annual mortality in England and Wales for four years, 1838-41 inclusive, comprehending the very fatal year 1838, on a population ascertained in 1841 to be 15,914,148, was only 10,550; and, the Vaccination Act having been passed in 1841, the annual average mortality from small-pox, for seven years, 1847-53 inclusive, on a population ascertained in 1851 to be 17,922,768, was further reduced to 5,412.

These figures not only show the diminution of mortality from small-pox since the introduction of vaccination, but also illustrate the value of legislative interference in diffusing the blessings of that practice.

But does this result exhibit all that vaccination is capable of effecting? If it did, we should indeed be a long way yet from the extermination of even fatal small-pox. The truth is, that of this annual aggregate of deaths, the immense majority are among those in whom vaccination has never been performed, and of whom we may safely say that, had it been performed, they would, so far as small-pox is concerned, have been alive still. Three-fourths, at least, of this mortality occurred under the age of five years: now, as death from small-pox in vaccinated children under five is of the rarest possible occurrence, there is no doubt that the whole of these, with scarcely any exception, had never been vaccinated. Of the remaining fourth there are no data whatever which enable us to determine what proportion had, and what proportion had not, been vaccinated. But there can be no doubt that comparatively few of them had been vaccinated at all, and that still fewer had been well and efficiently vaccinated. Of 1,091 deaths from small pox, above the age of five, occurring in sixteen years in the Small-pox Hospital, in only 191 was there clear evidence of vaccination; and in only thirteen out of these were there more than two cicatrices. Even of these thirteen, six died of superadded disease.

There are few countries in Europe in which vaccination is so much neglected as, till within a recent period, it has been in this; and hence, notwithstanding that the regulations of most of these States fall very short of a perfect system, yet in all of them the mortality from small-pox, as compared with the total mortality from all causes, is considerably less than with us. In England and Wales, on an average of the last seven years, and in London on an average of ten years, the mortality from small-pox has been fourteen out of every thousand deaths from all causes; while in Sweden, Bohemia, Venice, or Lombardy, it has not been above two. And the statement made applies to England and Wales only, and does not take into account Scotland and Ireland. In some towns in Scotland, as Greenock and Glasgow, the mortality from small-pox has been, on an average of several years, 32 and 36, respectively, out of every 1,000 deaths; and for all Ireland, during the ten years ending 1841, it was 49 per 1,000, and in the province of Connaught, 60 per 1,000 of the whole mortality. The Census for Ireland, indeed, for the ten years ending 1851, shows some diminution in this mortality; but the commissioners expressly state their belief, that this is "in a measure owing to the general deficiency of returns for the early years over which this inquiry has extended." As it is, no less than 38,275 deaths are returned as having occurred from small pox during this period, of which no fewer than 34,377 were under ten years of age. We may safely affirm that *the whole of these latter*, and by far the larger portion of the remainder, might have been saved by proper vaccination.

Dr. Seaton now proceeds to make a few remraks on eruptions, or other diseases, occurring at the time of, or immediately subsequent to, vaccination, on account of the great misapprehension which appears to exist on the subject, and of the many misstatements which have been made. The occurrences have been cited as evidence of disease communicated to the system through the medium of vaccine lymph, and have thus been made to support a prejudice which dates from the time when vaccination was objected to, because it infected the human system with the blood of a brute—the awful consequences of which are related in pamphlets of the period, wherein we find that in one case "the face began to resemble that of an ox," while in another there were actually to be seen "patches of cow's hair."

In the first place, it is to be observed that the occurrence of any eruption or other disease along with vaccination, or so immediately succeeding it that it can with any plausibility be connected with it, is quite exceptional. The vaccine disease, under all ordinary circumstances, runs its own definite course; and when it has subsided, the system is left in every respect in the same condition in which it was before the vaccination was effected, save only that it is free from the liability to be infected by small-pox.

Secondly, it has never been pretended that any of the diseases that have occasionally been observed at the time of, or immediately subsequent to, vaccination have a special or peculiar character; they are the same diseases as are met with in children at all periods of their existence, as arising from cold, dietetic and other causes independent of vaccination, and *especially at the period of dentition, to which time vaccination is too often deferred.*

Thirdly, it is quite obvious that the mere occurrence of such eruptions or diseases as these at the time of, or immediately subsequent to, vaccination does not constitute any proof that they have been either caused by, or that their appearance has even been in any degree promoted by, the vaccination. To establish such proof it would be needful to show, on a number of persons sufficiently large to obviate any sources of error, that these eruptions are *more frequent* in children under the influence of vaccination, than they are in children of the same age, of similar constitution, and under all the same external conditions, who are not, or who have not recently been, subjected to vaccination. Mr. Marson, who, since his residence at the Small-pox Hospital, has vaccinated upwards of 40,000 persons, states that he has never seen other diseases communicated with the vaccine disease, nor does he believe in the popular reports that they are ever so communicated. If such results were really true, as stated, and formed part of judiciously conducted vaccination, they must have come under his observation in vaccinating upwards of 40,000 persons. The testimony of nearly the whole medical profession is to the same effect.

There are, however, a few medical men who state that, in particular cases, they have seen some eruptive or some strumous disease arising in the system so closely upon vaccination, as to excite in their minds the belief that it depended upon that process,—the vaccination, as they explain it, having acted as an irritant and roused into activity some latent constitutional peculiarity, as a cold might have done, or as the variolous inoculation, when it was practised, used in some instances to do, according to the testimony of many physicians of the last century. These gentlemen specially guard against the notion that these affections are caused by the introduction into the system of any source of disease along with the lymph employed, by expressly mentioning in many instances that the same lymph used on other children developed no such affections:

they believe that the occurrence is due to the constitutional predisposition of the child vaccinated, and not to the source from which the lymph was taken. Dr. Seaton thinks that what they have taken to be a consequence may have been mere coincidence, and that in constitutions such as they describe, the affections might have arisen in the same way and at the same time, had no vaccination at all been performed.

British Medical Journal.

SATURDAY, JANUARY 31st, 1857.

PROFESSIONAL CHARGES.

There can be little doubt that the system of sending in bills for medicine "as long as my arm", to use a vulgar phrase, is greatly on the decline; and the letters we publish are pretty evident symptoms of the reform coming over the profession in this respect. There can be as little question that the general practitioner would improve his position if he could write his prescription, and reckon upon his fee for attendance, like the physician; and we cannot see why, in all large towns, this arrangement should not obtain. In country places, however, the medical man is obliged by the force of circumstances to supply and dispense his own drugs. This combination of the scientific character with the trading one may not be altogether what we could wish, but certainly the medical man is not to blame for it. When the Oxford Master of Arts goes sheep-tending in Australia, he is obliged to mingle occupations which would seem incompatible enough at Christ Church or Oriel, where he could obtain all the advantages of the subdivision of labour of a large city: so it is with the country doctor; he is both scientific man and chemist rolled into one, and in most cases a very able man into the bargain. As he is known to compound and supply his own drugs, it is not unnatural that his patients should look to be charged for them; and, looking to be charged, that they should require the items. We cannot, therefore, quite agree with our correspondent of last week signing himself "One jealous for the Honour of Medical Science", in his opinion that a man who makes out such a bill does it in the spirit of a grocer. We have the highest respect for the country practitioners: the wide range of their practice, and the isolated position in which they are placed, render them shrewd and self-dependent to a degree which often surprises the town bred medical man, who confines himself to some speciality. We regret, therefore, very much, such reflections upon so able a body of men. They do apply, however, most unmistakably, to a class of men who certainly damage the social position of our body—we allude to those medical men who keep open shops and dispense with an even hand patent medicines, tooth-brushes, and deadly drugs to poison *rats* with! Granted, however, that the system of making out bills for drugs is an evil brought upon us by the public, an evil nevertheless it is, and the sooner the profession can abolish it, and establish the custom of charging for visits, inclusive of medicine, the better. Irrespective of the objection to it as leading the public to class us with traders, as we see they do in the general directories, there is this other far weightier objection, that it renders the general practitioner open to the charge of *over-drugging*. We cannot conceal it from ourselves, that the age just past was an age of over-drugging. The physician who had no interest in "doctor's stuff," erred in this respect equally with the general practitioner. We have seen prescriptions four inches long, and composed of at least twenty different drugs; and we have counted "six ounce" bottles by the score that have accumulated in the houses of sick people. All men now agree that the system which made "a doctor's shop of a man's stomach" was a bad one, and bad men have taken advantage of the error to found upon it that gross fraud—homœopathy.

With a certain portion of the public, a not unnatural reaction has drifted them from too much physic to no physic at all. It seems to us, therefore, of the utmost importance that the general practitioner should, as speedily as possible, relieve himself from even the suspicion of giving drugs unnecessarily for the sake of swelling out a bill; and he can only do this by charging for professional attendance instead of for his medicine. Our associates will read with much pleasure a letter from our respected correspondent Dr. Frederick Brown, of Chatham, on this subject. We do not quite agree with him that practitioners should affix printed labels to their bills, "showing their charges." It would be more dignified, more in keeping with the practice of a liberal profession, to let such things be understood, rather than to proclaim them upon the housetop; but it would be a very great advantage if some scheme of fees could be agreed upon by the profession generally. We see no reason why this should not be as well accomplished in the case of the general practitioner as it is in that of the physician. The legislature has, indeed, adopted for him a scale of charges for attendance upon paupers—a shabby one, it is true, but still one that serves to prove that the object is attainable. Such charges, moreover, are inclusive of medicine; it would be a great pity, indeed, if we could not manage to deal in some fixed manner with the patients of the middle classes as we deal with the parish poor. The subject, however, requires ventilation, and we shall be glad to receive any suggestions which may be useful in a further review of it.

THE WEEK.

The Medical Students of University College seem determined to shame the apathetic section of the Poor-law medical officers by the energy with which they have taken up Mr. Griffin's movement. On Saturday last, at a meeting held by them, Mr. Price Jones in the chair, they passed, not only unanimously, but, we hear, with enthusiasm, the following resolutions:—

"Resolution I. That the thanks of this meeting be cordially given to Mr. Griffin for his exertions on behalf of union medical officers.

"Resolution II. That this meeting pledges itself to support the movement commenced by Mr. Griffin, and considers that the salaries now paid to union medical officers, affording very inadequate remuneration, should be revised and increased.

"Resolution III. That this meeting regards the object sought to be obtained by it, as not only of serious importance to the welfare of the whole medical profession, but also as involving the true interests of the public at large.

"Resolution IV. That in order to secure to the scientific medical practitioner the fruits of his labour and self-denial in study, it is advisable that Government should not appoint to any public situation any but such as have by public examina-

tion proved themselves to be the fittest men to fill the post, and this principle is applicable to the appointment of the medical officers connected with the Poor-law, as this is in reality a public service.

"Resolution v. That this meeting, conside gunity of purpose and good faith among members of the profession of vital importance to the cause of Poor-law medical reform, desires to express its unqualified disapproval of the conduct of those who not only treat this movement with neglect and apathy, but even act contrary to its principles.

"Resolution vi. That this meeting shall adopt measures to form a branch association among medical students, and other junior members of the profession, in aid of Mr. Griffin's movement.

"Resolution vii. That the resolutions of this meeting be forwarded to the medical and other leading journals; and also to Mr. Griffin, with the expression of its warmest and most zealous sympathy.

"Resolution viii. That in order to testify its sympathy in a practical manner, a shilling subscription be opened, and the sum collected to be placed to the account of the Poor-law Medical Reform Association at Williams' bank.

"Resolution ix. That in order to carry out the objects of this meeting a committee be formed, consisting of a Chairman, Treasurer, Secretary, and three other gentlemen. That the committee consist of Mr. W. Price Jones, Chairman; Mr. J. Mockridge, Treasurer; Mr. W. T. Fox, Hon. Sec.; Mr. E. W. Thomas, Mr. D. Richards, Mr. C. Drysdale.

"Resolution x. That the thanks of this meeting be cordially given to the chairman (W. Price Jones, Esq.) for the able manner in which he has conducted the meeting, and for his zealous exertions in behalf of the movement.

"WILLIAM TILBURY FOX, *Hon. Sec.*

We promise to give our hearty support to this "Branch Association", and trust they will be as successful in giving a fresh impetus to Mr. Griffin's movement as the medical students were in obtaining redress for the assistant-surgeons in the navy. We trust an aggregate meeting of the London students will speedily be held, at which we should like to see a representative from each of the medical schools throughout the kingdom. The students of the Medical Schools in the provinces will not, we trust, omit to take a part, by deputy at least, in such a meeting. After the extraordinary, and, we must state, unaccountable apathy, exhibited by two-thirds of the union surgeons of the kingdom, we shall hail with no little pleasure the generous energy of the younger members of the profession who, thus early in life, stand forward to do battle on the behalf of an oppressed portion of our body.

We are glad to hear that the Medical Benevolent Fund is likely to receive further benefit from the estate of the late Mr. Camps of Fenny Stratford. This benevolent gentleman left, it will be remembered, to this excellent institution a sum of £750, free of duty. He also made the institution his residuary legatee; and the executor has, we believe, intimated to the secretary his belief that a considerable sum will be added to the Fund from this source. Mr. Camps, who formerly practised at Berkhampstead, was a member of the Society of Friends.

Association Intelligence.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
METROP. COUNTIES. [General Meeting.]	37, Soho Square, London.	Tues., Feb. 10, 4 P.M.

ADMISSION OF NEW MEMBERS.

THE LAWS of the BRITISH MEDICAL ASSOCIATION, with regard to the admission of new members, are the following:—

Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any three members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch.

The subscription to the Association shall be One Guinea annually; and each member on paying his subscription shall be entitled to receive the publications of the Association of the current year. The subscription shall date from the 1st January in each year.

The names of new members should be forwarded to the Secretary, Dr. P. H. WILLIAMS, Worcester; or to any of the Secretaries of the Branches.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 13TH, 1857.

JOHN WEBSTER, M.D., F.R.S., Vice-President, in the Chair.

ON THE DETERMINING CAUSES OF VESICULAR EMPHYSEMA OF THE LUNG. BY WILLIAM JENNER, M.D., F.R.C.P.

[*Continued from page 76.*]

Dr. SIBSON had in 1844 published a paper, in which he espoused the inspiratory theory—a theory opposed to that brought forward by Dr. Jenner. He (Dr. Sibson) had attempted, however, to disembarrass his mind as completely as possible of his previous views, while listening to Dr. Jenner's paper, but those views had not been in the slightest degree modified by what he had heard. It had been stated that in emphysema, during coughing, the lung rose up into the neck, and above the clavicle; but he maintained that it was not the lung that then rose, but the large venous sinuses of the neck that were greatly distended. Dr. Jenner said that during inspiration there was a falling-in of the lung at that part; but he (Dr. Sibson) contended that that arose from the opposite cause to that alleged—namely, the blood being prevented from entering into the right side of the heart. The upper part of the chest was not, as stated, that which least supported the lung during expiration, it being, as he was able to prove, the most supported part in all animals that breathed with the diaphragm. In all such animals, with the exception of the anteater (in which the first rib resembled that of birds and reptiles), the upper rib was the strongest of all. In animals that did not breathe with the diaphragm, the upper ribs were not included in the sternal set, these commencing lower down. But in animals that breathed with the diaphragm, the lung was drawn forcibly down; and were there not an enormous counterpoise, it would be drawn inwards at each inspiration, so that there would be a large chasm in the upper part of the chest and the lower part of the neck, instead of the lungs being expanded equally in every direction. The upper rib was the strongest; it had muscles of great power acting immediately upon it, inclosing the lung in a muscular case of great firmness, which, during inspiration, while it drew up the ribs (particularly the first and second), also drew up the upper part of the lung; and there was a small muscle acting upon the portion of cellular tissue outside the pleura, to draw up the apex. The muscles yielded but little during expiration. Putting them aside, however, there was but a small portion of the apex above the anterior part of the first rib, the more important part of it lying upon the first, second, and third ribs. That was a part eminently the subject of emphysema, and it would be found, by *post mortem* examination of cases of emphysema, that there were none in which so small a portion of the lung was superior

to the first rib; while in none was there so large a portion as in cases of phthisis. He was convinced that if Dr. Jenner would examine his position with increased care, he would modify the views he had expressed. The idea of the lung being variously supported during expiration was opposed to the commonest law of physics, that of the pressure of fluids being equal in every direction. It was true in reference to the ribs, cartilages, diaphragm, liver, etc., that some of them were more yielding than others; but they were all less yielding than any part of the texture of the lung itself. Dr. Jenner had rightly said that the lowest part of the lung in front was the part that fell in during inspiration in emphysema; but there was a portion at the upper part of the sternum (the whole of the two upper thirds) more emphysematous than any other, and that was the portion more expanded during inspiration in emphysema, and the most pressed out during expiration. Respiration there was only about one-five-hundredth of an inch, whereas in many cases of emphysema he had known it rise as high as one-twentieth. At the lower part of the sternum it fell in, and the expansion there, at all events, could not be by expiration. At the lower part the lung was exceedingly lengthened downwards in every case of emphysema, sometimes by an inch or an inch and a half. The form of the chest in emphysema was inspiratory, the shoulders and sternum being raised, the neck shortened, the head dropping, the scapula raised upwards away from the chest, the walls of which universally expanded, except over the lower region; and surely it was not rational to conclude, since the form was inspiratory, that the cause of emphysema was expiratory. He thought, however, that there was an expiratory cause, when the emphysema assumed a certain form familiar to pathologists, that of a peculiar sacculated projection. In those cases the cells were greatly swollen, in consequence of the impossibility of the escape of the air from the bronchial tubes during expiration. During inspiration the tubes were being widened, and the facility of expiration was gradually diminished, so that a large part of the air inspired could not get out. But he maintained that the usual cause was inspiratory. In one or two *post mortem* examinations, he thought he had traced another cause—namely, the confinement of fluid within certain lobules, thus enlarging, and sometimes bursting them. Such cases, however, were very exceptional. He did not think that the inspiratory theory was at all affected by the paper of Dr. Jenner.

Dr. Edward Smith remarked, that the author's theory was not so opposed to that ordinarily received as the antithesis of the terms inspiratory and expiratory, as the author's denunciation of the respiratory theory seemed to imply; since on both theories alike the disease is produced by the forcible entrance of air into the cells. The disease is not produced by or during expiration, since it is essential, on the author's theory, that the glottis should be closed, and hence, when expiration is permitted, the production of the disease cannot occur. The occurrence of the disease with cough (that is, under the conditions mentioned by the author) has long been admitted by the advocates of the inspiratory theory; and since the essential act in the induction of the disease is the introduction of air into the cells, he would regard the author's theory simply as a modification of the inspiratory, notwithstanding that the power employed is that which, with the glottis open, would be expiratory. The author's theory is one of compression and dislocation of the contained air, and not of expiration. In cases of chronic bronchitis, he believed the disease to be often directly induced by inspiration. In that disease there is obstruction to the entrance of the air from the retention of an excessive volume of the residual and reserve air, whereby the cells remain at all times too much distended; and the dypsnœa is mainly owing to the fact, that a sufficient quantity of tidal air cannot gain access to the air-cells, whilst the residual and reserve air become effete by reason of insufficient change. Hence the efforts to inspire are unusually forcible and sudden, whilst the movements of respiration are unusually small, so that a greater pressure must be exerted upon the column of air in the air cells than is found in health; and thus at the points the least supported, or enfeebled by disease, and also at those the most in the line of the inspiratory power, the cells will dilate.

Dr. Snow said that he had paid some attention to the subject of emphysema about fifteen years ago, and at that time he advocated the opinion that this lesion could only be produced during inspiration. At that time, however, he took it for granted that the chest was a cavity equally supported at all parts, when the pressure would of course be equal in all directions, and distension of the air-cells during expiration would be impossible. The circumstance pointed out by Dr. Jenner, that the resistance was less above the clavicles than at other parts, altered the question a little, but he still considered that the air-cells of no part of the lungs could be distended during expiration. In order that the air-cells of the upper part of the lungs should be distended during expiration, it would be necessary that the air should be entering the bronchial tubes at this part, whilst it was leaving the bronchial tubes of the other parts of the lungs, but he did not think that the structure of the bronchi would allow of air being pressed in this manner; he thought they would sooner collapse by the pressure.

Dr. West considered that previous theories as to the causes of emphysema needed some such modification as that suggested by Dr. Jenner, to account for the frequent occurrence of that condition in children in cases of hooping-cough and croup independent of bronchitis. He did not agree with Dr. Jenner respecting the occurrence of emphysema in cases of pneumonia, as he had observed it in many cases, especially in early life, and that to an extent proportionate to the rapidity with which the pneumonia had set in.

Dr. Graily Hewitt had had frequent opportunities of observing the occurrence of vesicular emphysema in infants and young children dying from bronchitis or from diseases in which bronchitis was an essential ingredient. He had not observed, however, that the emphysema was limited to the upper lobes of the lungs or to the margins of lobes. Patches of emphysema were usually scattered here and there, and almost always in close apposition with portions of the lung which had become collapsed or apneumatic. This was, according to his experience, so constantly the case, that finding certain parts in a state of apneumatosis, it might with confidence be predicted that emphysematous portions would be found near them. He therefore considered that in these cases the emphysema was a direct consequence of the other condition.

Dr. Barclay believed that both parties were in error with respect to the physical explanation. One contended that there could not be any pressure upon the interior of the vesicles during inspiration, and the other, that there could not be pressure upon the exterior of the lungs during expiration. If at any time the lung structure was not sufficiently expanded so as to fill the chest when the chest was expanded by inspiration, an unequal pressure would be exerted by the atmosphere upon different parts, and the weakest portion of the lung would give way, and vesicular emphysema be found. Dr. Sibson was in error in saying that the pressure during expiration was equally exerted by the ribs and soft structures. When the pressure was produced by the rib, the intermediate soft structure gave way and bulged, and there was nothing to prove it impossible that the lung should give way in parts where the chest was weakest, vesicular emphysema being then formed by the forcible compression of the lung structure during an expiratory effort with a closed glottis.

Dr. Sibson, in explanation, had only stated that whilst the different parts of the chest yielded in different degrees, they were none of them so yielding as the lungs themselves. He agreed with the position laid down by Dr. Barclay.

Dr. Black could not agree with the views advanced by Dr. Jenner. He stated that the apices of the lungs were the parts most liable to distension, and argued that that was attributable to the comparative immobility of the part; but he (Dr. Black) could not see how the inference drawn by Dr. Jenner could be maintained. If the lungs were spherical, they would expand equally in all directions; but as the apices were in the most contracted part, of course there would be the least expansion there, which was merely the exact harmony of the part to the substance that had to be expanded.

Mr. J. Hutchinson suggested that both the inspiratory and expiratory theories might be true, and that Dr. Jenner's theory could be more easily understood, and more likely to be received, if, instead of speaking of irregular support, he had spoken of irregular compression. With regard to the equal pressure of fluids in all directions, that law only applied to fluids at rest.

Mr. Brook remarked that the only disturbance of that law would be the momentum of the air, which was very slight, and could not be increased by any contrivance that might be attempted. Suppose an inflated lung to be enclosed in an India-rubber bottle, and subjected to pressure, that part would give way where the bottle was weakest, and would, he apprehended, become emphysematous.

Dr. Jenner did not exclude the inspiratory theory, which, he had no doubt, was applicable in certain cases, especially to those mentioned by Dr. Hewitt.

Dr. Peacock believed Dr. Jenner's views to be applicable to

the explanation of the mode of origin of some forms of emphysema of the lungs, but that there were others which were more readily explained on the inspiratory theory. He observed that Dr. Jenner regarded the acute emphysema of infants as certainly produced by violent expiratory efforts. If, however, Dr. Jenner meant his views to be extended to the acute emphysema of adults, he (Dr. Peacock) could not coincide in that opinion. The acute emphysema which occurs in acute capillary bronchitis he regarded as much more readily explained on the inspiratory theory. In that disease, one of the peculiar features is the abortive character of the cough, whereas the existence of collapse of the lungs in such cases readily explained the presence of emphysema.

Dr. JENNER replied that acute emphysema in children was not peculiar to cases of bronchitis. He had seen cases of acute emphysema, in which there was little or no collapse.

MEDICAL SOCIETY OF LONDON.

SATURDAY, JANUARY 10TH, 1857.

H. P. ROBARTS, Esq., Vice-President, in the Chair.

TUMOUR IN THE ABDOMEN. BY H. SMITH, ESQ.

The patient, a lady, aged 40, had suffered from the tumour, more or less, for years; but it had more particularly attracted attention since the period of her marriage, between two and three years previously. Some months after this event, a very distinguished physician-accoucheur had been consulted, and he had come to the conclusion that the lady was pregnant, and would be delivered in a few weeks. Many others had since been consulted, and amongst them was another physician of large experience, who considered that the tumour might be an enlargement of the spleen, of a malignant character. On *post mortem* examination, Mr. SMITH found the entire abdominal cavity to be filled with an immense tumour, which displaced everything; and on careful manipulation, this tumour was found to be totally unconnected with the surrounding parts over by far the greater portion of its surface; on the left side, however, there was a small patch of adhesions between the tumour and peritoneum, which were easily broken down by the finger; and a little above this there was a connexion between the two surfaces, which was so firm, that it was necessary to use the knife. On turning the tumour forward, it was found to be connected with the right ovary by a narrow pedicle, and to the broad ligament of the uterus by a process of peritoneum of considerable breadth. Quite posteriorly the tumour was adherent to the greater omentum, and it was necessary to cut through this with the knife. There was very little fluid in the abdomen, and the tumour itself was a solid vascular-looking mass, not unlike the interior of a softened spleen. There were two or three small cysts fringing its border.

This case was mentioned to show the difficulty of diagnosis which might be occasioned by some of these abdominal swellings. Moreover, Mr. Smith thought that it was interesting in connexion with the question of operation, if such had been suggested; for although the tumour was entirely free from adhesions over the greater part of its circumference, and could, perhaps, have been so determined during life, yet the adhesions to the omentum alone would have seriously interfered with the safety of an operation, and of course it would be perfectly impossible to diagnose adhesions posteriorly during life.

ON CASES ILLUSTRATING THE DIAGNOSIS AND TREATMENT OF CERTAIN DISEASES OF THE BRAIN.

BY J. RUSSELL REYNOLDS, M.D.

The author commenced by reading the records of six cases of cerebral disease, which bore a close general resemblance to each other, presenting epileptiform convulsions, and more or less headache, with paralysis, spasm, and diminished or perverted sensibility. A short recapitulation of the cases was then given; and this followed by an analysis of each case into groups of symptoms, classified under the three heads of altered mental, motorial, and sensorial function. In this analysis it was pointed out, that the cases differed in regard of the relative intensity, and mode of production, of the several symptoms; and the diagnostic characters of cerebral disease were shown not to differ in kind from those employed in the discrimination of lesions in other organs. Reference was made to the possibility, and frequent occurrence, of diagnosis between such diseases of the chest, as bronchitis, pleurisy, pneumonia, phthisis, etc., by a consideration of the relative intensity, and mode of production, of symptoms, such as cough, dyspnœa, pain, expectoration, and fever, common to them all. A similar mode of examining the cases under consideration was shown to result in the following diagnosis:—The 1st, as a case of simple epilepsy; 2nd, as chronic meningitis; 3rd and 4th, as tumour; 5th, as chronic softening; and, 6th, as Bright's disease, with urinæmia. It was then urged that the difference observed between these cases, though stated as the result of direct observation, was conformable with what might be anticipated from a consideration of the nature of the lesion in each. It was stated, that epilepsy did not constantly, and therefore did not necessarily (no matter how long it may have existed), include any other symptoms than those of the attacks; and it was urged, that when other symptoms present themselves, the cases he considered either as complications of epilepsy, or as some other disease. In relation to treatment, the most important point was to recognise the existence of chronic meningitis, and to treat this either as a disease in itself, or as the complication of either epilepsy, or tumour, or softening. The treatment especially dwelt upon as the most important in cases of chronic meningitis, was the long protracted exhibition of mercury.

Editor's Letter Box.

PROFESSIONAL CHARGES.

LETTER FROM F. J. BROWN, M.D.

SIR,—I. There appears to be a growing desire on the part of the medical practitioners of England to abandon the mode of charging that was employed by the apothecaries of old. Many send in their bills for "professional attendance, with medicine". A still better mode is to charge for advice only, in the following terms—"For professional advice". I recommend the affixing of printed labels, shewing the charges, to the bills, in the following form:—

CHARGES FOR ADVICE.

Fees, £1:1:0 for one visit.
„ £1:1:0 for three visits.

Charges for ordinary attendance.

Middle classes.	2*s.* 6*d.* to 5*s.* each day visit.	
	10*s.* each night visit.	
	11 P.M. to 7. A.M.	
Working classes.	2*s.* to 5*s.* each day visit.	
	5*s.* each night visit.	

Midwifery.

Middle classes.	£2:2:0 to £3:3:0
Working classes.	£1:1:0

Vaccination.

Middle classes.	5*s.* to 10*s.* 6*d.*
Working classes.	2*s.* 6*d.*

The scale of charges that I recommend for general adoption is that in use amongst the principal surgeons residing in Manchester. There is no objection to the charge of half a guinea for midwifery in the case of poor labourers; and a portion of visits may be charged when the whole cannot reasonably be paid for.

If all practitioners were to adopt this scale, or some other one agreed upon, it would establish a set of charges that would be recognised by the public.

II. I propose that junior practitioners should be permitted by professional etiquette to charge small sums for attendance; whilst surgeons that are established in practice should adhere to the recognised scale. This would enable young surgeons to acquire practice in a legitimate way, and it would greatly benefit the public, for it would give them the advice of qualified practitioners in lieu of that of druggists. It would also confer a benefit upon the established practitioners; for the persons consulting them would know that they must pay the higher fees. The older practitioners would, moreover, be more at leisure than they now are, whilst their incomes would be equally good.

Instead of fearing the new-comer, the established practitioners are bound, even now, in my opinion, to welcome and to encourage him. It is a contemptible sight to witness jealousy and meanness in cases of this description; and it is suicidal policy in the long run. The acceptance of union appointments by established practitioners, to keep other surgeons away, is an odious practice, which punishes those that are guilty of it.

III. I recommend that the following books should be kept by every practitioner:—

1. *For Scientific Purposes.*

(*a.*) Register of cases with five columns, viz., for name, etc., for residence, for entry, for discharge, and for disease. A moveable index answers well for the register.

(*b.*) Professional journal for important cases.
(*c.*) Midwifery register.

2. *For Business Purposes.*

(*a.*) Prescription book.
(*b.*) Visit and advice book.
(*c.*) Ledger.
(*d.*) Cash book.

The advice book is a broad one. The names are entered alphabetically each month, and the dates are entered along the line against each name. It is well to distinguish visits from *advice at the surgeon's house*, by placing V. before the date in the one case, and Adv. in the other. When patients send for medicine without being seen, the entry should be M. before the date, to show that medicine had been given without advice. This is a necessary measure to prevent loss in certain cases, for country patients will often send for medicine many times in succession without receiving a visit. Midwifery and operations require special entries in the "broad sheet". With such an advice book, the posting is very easy, and the ledger requires to be only of small size.

If you deem these remarks of service to the profession, please to publish them in the JOURNAL.

I am, etc., FRED. JAMES BROWN, M.D.

Chatham, Kent, January 26th, 1857.

POOR-LAW MEDICAL REFORM.

LETTER FROM R. GRIFFIN, ESQ.

SIR,—I shall feel obliged by the insertion in the JOURNAL of my letter to the Poor-Law Medical Officers. To save time and trouble to the local secretaries, I have had a list prepared of the residences of all the medical men, as far as I can ascertain them, and have forwarded a pamphlet to each. Should any gentleman be accidentally omitted, and will inform me of it, I will send him a copy immediately.

I am, etc., RICHARD GRIFFIN.

12, Royal Terrace, Weymouth, January 24th, 1857.

"*Poor-Law Medical Reform Association.*

"DEAR SIR,—In drawing up the accompanying statement, I have been guided by the replies to the questions issued in October last. Should it not meet with the concurrence of all, the fault rests with those who were too apathetic to make returns.

"The correspondence is inserted with no egotistical feeling, but simply to enable Lord Palmerston, Her Majesty's Ministers, and the members of the House of Lords and Commons (for whose perusal it is especially printed), to understand by a narration of facts the complaints of the union medical officer.

"A general meeting of poor-law medical officers will shortly be convened, of which due notice will be given in the journals. Prior to this, it is desirable to ascertain the number of medical men on whom we may depend to sign the petitions that may be sent to them. There are now 1,500 members on the books of the Poor-Law Medical Reform Association, on whom, I believe, we may confidently rely: but to prevent the possibility of error, I think it a safe course again to request each medical officer will do me the favour to inform me, *within one week*, if he will support us in the forthcoming struggle, which unanimity and good fellowship may make final. It must be obvious to all, that this is not a mere personal affair between a few medical officers on one side, and the Poor-Law Board and Guardians on the other, but a public association for the benefit of the entire body of poor-law medical men; and consequently, it becomes the duty of each to unite with his brethren for the general good. In 1855, a sum of £230,000 was paid for medical attendance on the poor; by the plan proposed, this amount will be greatly increased; it therefore is most important that all should unite to obtain so desirable an object.

"To prosecute with vigour an affair of this magnitude, requires ample funds; and it devolves upon me again to tax the liberality of my brethren, by requesting subscriptions may be forwarded without delay, either by postage stamps, when the amount does not exceed five shillings, or by post-office order. Economy of time being also an object in conducting so extensive a correspondence, I shall feel obliged by each note being headed with the name of the union to which the officer belongs.

"A copy of the pamphlet will be forwarded to each member of the Houses of Peers and Commons, in order that they may understand what we require; but I shall wait one week before doing this, to give time for gentlemen who are personally acquainted, or have influence with, any nobleman or gentleman of either House, to apply for a copy, that they may send it and a private note to insure attention.

"For the sake of the profession and sick poor, I ardently desire this movement may succeed. Personally, it is most probable I shall not reap any benefit from it, as no individual can long withstand the machinations to which I am exposed. Last month, the Weymouth Board of Guardians requested leave of the Poor-Law Board *to suspend me;* this week they have passed a vote of the *severest censure upon me*, and forwarded it to the Poor-Law Board, I presume, privately to blacken my character in that quarter, as they have not had the manliness to inform me of either of these resolutions. They endeavour to veil their actions in impenetrable secrecy. There are, however, some whose babbling propensities make them boast of their doings and their determination to get rid of me *coute qui coute;* hence my knowledge of the facts. No body of men can have done more to illustrate our grievances and damnify themselves than the Weymouth Board of Guardians:

"'quem Deus vult perdere
Prius dementat.'

"A member of this Board is a retired surgeon of ample fortune.

"The medical journals have nobly advocated our cause; the students, with all the warmth and energy of youth, are generously rising in our behalf; your old and tried friend, Mr. Lord, still continues his strenuous exertions, as will be seen by his admirable letter; and it now only rests with the Poor-Law Medical Officers to unite, and by one determined effort to endeavour to emancipate themselves from the disgraceful thraldom they have so long endured.

"I am, dear sir, faithfully yours,
"RICHARD GRIFFIN.

"12, Royal Terrace, Weymouth, January 24th, 1857."

POOR-LAW MEDICAL REFORM.

LETTER FROM THOMAS HODGKIN, M.D.

I have to-day received the recent pamphlet of our zealous colleague, R. Griffin, addressed to Lord Palmerston. I regard it as highly important to the success of the renewed effort which he has so strenuously and indefatigably made in behalf of his professional brethren engaged in succouring the poor in sickness, that the present period should be turned to the best account, by the co-operation of medical men throughout the kingdom.

The meeting of Parliament will shortly bring members of the House of Commons from all parts of England; and it is very desirable that every one of them should be duly informed, by the medical man who attends his family and enjoys his confidence, of the facts afresh set forth in the able pamphlet alluded to, and be thoroughly impressed with the importance of the subject as respects the welfare of the poor, the interests of the public, and the just treatment of the medical officers. The course and tendency of any discussion in Parliament in relation to Poor-law medical relief, could not fail to be favourably influenced by the adoption of such a plan.

Impressed with this conviction, I cannot neglect to offer the suggestion, that it may find a place in the pages of the BRITISH MEDICAL JOURNAL.

I would further observe, that, much as we must desire improved legislation in regard to the medical profession, I feel assured that all attempts in this direction must prove more or less abortive unless medical men in different parts of the kingdom unitedly and cordially endeavour to obtain the desired reform in their respective districts, not merely by fraternal co-operation, but by the exertion of their personal influence with the guardians of the poor. The same plans are not equally applicable to all localities. The right adaptation of different plans to different situations cannot be determined by a central authority so well as by the united knowledge and judgment of the medical men and of the Poor-law guardians, sincerely and harmoniously endeavouring to obtain the largest amount of public good.

Notwithstanding the flagrant and sadly numerous instances of medical men being unjustly treated, I believe that their labours amongst the poor are often praised and valued, as I have reason to know that they ought to be; and I cannot doubt that the requisite alterations would in many instances be cheerfully effected, if advocated in the mode which I have proposed.

In poor and populous districts, it is accordant with theory and experience, and equally advantageous and convenient to the

poor and to the members of the medical profession, to employ duly qualified medical men exclusively devoted to parochial medical relief; but, in thinly peopled agricultural districts, a far larger subdivision of service than at present exists would, I submit, be attended with no small advantage both to the poor and to the profession. Thine sincerely,

THOMAS HODGKIN.

Bedford Square, 27, I, 1857.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

AIKIN. On January 25th, the wife of C. A. Aikin, Esq., Surgeon, of 8, Southwick Street, Hyde Park, of a son.

BILLINGHURST. On January 23rd, at 41, Halliford Street, Islington, the wife of Henry Billinghurst, Esq., Surgeon, of a daughter.

KNAGGS. On January 26th, at Maldon Place, Haverstock Hill, the wife of Henry Guard Knaggs, Esq., Surgeon, of a son.

MARSHALL. On January 25th, the wife of Peter Marshall, Esq., Surgeon, of 42, Bedford Square, of twin daughters.

*SPENCER. On January 24th, the wife of J. H. Spencer, Esq., of Hallaton, Leicestershire, of a son.

SPICER. On January 18th, the wife of H. S. Spicer, Esq., Surgeon, of North Molton, Devon, of a son.

STEVENS. On January 26th, at Hoddesdon, Herts, the wife of Robert Ingram Stevens, Esq., Surgeon, of a son.

TOPHAM. On January 22nd, the wife of John Topham, M.D., of Wolverhampton, of a son.

WANE. On January 26th, at 20, Grafton Street, Berkeley Square, the wife of Daniel Wane, M.D., of a daughter.

MARRIAGES.

BURTON—PAGE. BURTON, Robert Graves, M.D., Assistant-Surgeon 77th Regiment, to Elvira, daughter of the Rev. Jas. Page, at St. Luke's, Chelsea, on January 20th.

GOODWIN—PEEL. GOODWIN, John Wycliffe, M.D., of Norwich, to Frances Emma, eldest daughter of Joseph Peel, Esq., of Singleton Brook, Manchester, at Broughton, on Jan. 22nd.

HOME—FAIRBANK. HOME, Alexander Gordon, M.D., of Whitfield, Edinburgh, to Hannah Priscilla, youngest daughter of the late Josiah Fairbank, Esq., of Westhill, Yorkshire, at Paris, on January 21st.

SIMPSON—CAMPBELL. SIMPSON, George, jun., Esq., Surgeon, of Gower Street, Bedford Square, to Jane, eldest daughter of the late Hugh Campbell, Esq., at Southweald, Essex.

STOCKWELL—TATUM. STOCKWELL, Francis William, Esq., of Richmond, Surrey, to Ellen, eldest daughter of Thomas Tatum, Esq., Surgeon, of George Street, Hanover Square, at St. George's, Hanover Square, on January 22nd.

DEATHS.

ADAMS. On January 25th, Sarah, wife of R. E. Adams, Esq., Surgeon, of Sevenoaks.

ALEXANDER, W., M.D., of Halifax, on December 31st, 1856.

*CARY. On January 23rd, Eliza, wife of William Henry Cary, Esq., Surgeon, of Woodford, Essex, aged 49.

CRICHTON. On January 20th, at the Grove, near Sevenoaks, Frances, widow of Sir Alexander Crichton, M.D., F.R.S., aged 85.

MCCLELLAND, Joseph, M.D., at Manchester, aged 45, on January 12th.

*MOREY, John Egleton, Esq., Surgeon, late of Doncaster, at Almholme, on January 19th.

NORMAN. On January 26th, at 7, Manchester Square, Henry Charles, second son of H. Burford Norman, Esq., Surgeon, aged 4 years and 10 months.

PALMER. At Ormskirk, on January 15th, Harold, infant son of Charles Palmer, M.D.

THOMSON. At Liverpool, on January 15th, Caroline, daughter of David P. Thomson, M.D.

HEALTH OF LONDON: — WEEK ENDING JANUARY 24TH, 1857.

[From the Registrar-General's Report.]

THE deaths registered in London, which in the two previous weeks had been 1135 and 1171, rose in the week that ended last Saturday to 1216. In the ten years, 1847-56, the average number of deaths in the weeks corresponding with last week was 1177. But if the deaths of last week are to be compared with the average, the latter should be raised proportionally to the increase of population, in which case it will become 1295. Hence it will be seen that although the rate of mortality has been rising lately, it is still below the average.

In comparing the results of the last two weeks an increase is observed in the deaths of old persons; for whereas 41 men and women, who had attained the age of 80 years or upwards, died in the former week, the number last week was 74. In these 74 old persons an unusual number of nonagenarians is recorded, namely, 14; a man and a woman were each 95 years of age, and the two oldest were women who had reached the age of 96 years.

In the present as compared with the previous return there is an increase in zymotic diseases, and also in diseases of the nervous system and the heart; whilst the numbers referred to pulmonary complaints are almost identical, and deaths by phthisis (or consumption) decreased from 152 to 135. The increase in the class first mentioned arises altogether from hooping-cough and typhus (which includes common fever), the cases in which the former was fatal having increased from 55 to 67, and those of the latter from 34 to 52. Six children died of hooping-cough in the sub-district of St. Margaret, Westminster, and 3 of these in the same house, viz., 2, Church-court. Three men died of "febris" on the 21st, 22nd, and 23rd instant respectively in the Workhouse, Mile-end New Town. Measles was fatal last week in 26 cases. This complaint appears to have prevailed in the Norwood Workhouse, as four young children died there from it between the 11th and 17th of January. A musician who resides at 117, Lillington-street, Westminster, has lately lost all his children (four daughters) from measles.

Three persons died of carbuncle. The deaths of 5 persons are recorded in the present return as caused by intemperance.

Last week the births of 904 boys and 885 girls, in all 1789 children, were registered in London. In the ten corresponding weeks of the years 1847-56 the average number was 1553.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·547 in. The highest reading was 30·20 in. at the beginning of the week; the lowest 28·97 in. on Saturday. The mean temperature of the week was 38·1°, which is 1° above the average of the same week in 43 years (as determined by Mr. Glaisher). The *highest* temperature occurred on Sunday (the 18th), and was 49·8°; the *lowest* was 28·4°, which occurred on Thursday; the range of the week was 21·4°. The mean dew-point temperature was 36·1°, and the difference between this and the mean air temperature was 2°. The mean temperature of the water of the Thames was 39·4°. The temperature of the river was remarkably constant. The wind blew generally from the west. Its horizontal movement varied from 15 miles on Wednesday to 165 on Friday. Rain fell to the amount of 0·41 in., more than half of which fell on Tuesday. Rain fell on every day, except Wednesday.

HEALTH OF LONDON IN 1856.

IN the 52 weeks that ended December 27th the number of children born in London was 86,833. According to a rule which holds invariably in this large population, the number of males exceeded that of females, for the births consisted of 44,159 boys and 42,674 girls. In the same period 56,786 persons died, namely, 28,894 males and 27,892 females. The births increase more or less rapidly with the population; and under a reduced rate of mortality the number of deaths in 1856 was less than that of any previous year since 1852: and the result is an excess, greater than was obtained in any former year, of births over deaths. This excess is 30,047. Soldiers and seamen have returned from the seat of war; persons engaged in peaceful pursuits have arrived in the capital from other parts of the United Kingdom and from abroad; and though many have left it for other homes, it may be assumed that sustenance, clothing, and house accommodation must now be found in London for about 60,000 inhabitants more than it contained at the end of 1855.

Last year the public health was unusually good. During the last ten years the annual deaths in London have been on the average 25 to a thousand of the population; in 1856 the proportion was 22 to a thousand. The mortality was lower than in any year within the limits of this comparison, except 1850, when it was slightly less than 21 in a thousand, a reduction which, it is probable, was partly the consequence of the premature destruction of infirm persons by the cholera of the previous year. That improved state of health which last year prevailed in London as a whole was in various degrees enjoyed by each of the five great divisions of which it is composed. The mortality ranged from 21 in the Western and Northern divisions to 23 in the Eastern. But without reference to the rate of mortality—or the proportion of deaths to population—which alone furnishes a criterion of health, a comparison of deaths registered in the several *districts* will in some cases strikingly indicate the changes always in progress in the component parts of that vast "contiguity" of brick to which the term "London" is now applied. Westminster, selected for measures of improvement with some other districts, exhibits a decided decrease in the deaths; whilst in Kensington, Islington, Lewisham—desirable neighbourhoods on the outskirts—the deaths following population show a still more manifest increase.

The meteorological conditions of the year appear to have been generally favourable to health. The mean temperature at Greenwich was 49°·1, which approximates closely to the average as obtained from a long series of years. The winter, viz. January, February, and March, was mild; the mean weekly temperature was frequently above 42°, and rose as high as 44° and 47°; and in the fifth week of the year the deaths fell to 949. Diarrhœa prevailed amongst infants in summer, which to other classes of the community is the healthiest season; and hence, though the mortality was rather higher in winter than in the other quarters, its uniformity throughout the year is remarkable. An exception to this statement must be made with regard to October, which was conspicuous among the months for its low rate of mortality, the weekly deaths having been considerably less than a thousand. The mean temperature during great part of that month was 53°. The most fatal period was the first week in December, when the deaths arose above 1300, in consequence of great rigour combined with sudden change in the state of the atmosphere. Twenty-two inches of rain fell in 1856; the average of the last 40 years is nearly 26. In the second quarter the rain-fall was in excess of the average. The horizontal movement of the air was on an average 4 miles an hour.

The decline of small-pox in London may be traced through the last seven quarters. In the spring quarter of 1855 the deaths from it were 328; thereafter the quarterly numbers were 196, 177, 194, 146, 108, having decreased almost continuously till they were only 74 in the last quarter of 1856. The annual mortality from scarlatina has also been very perceptibly less since 1851. If the deaths from this disease, as they occurred in four seasons during the last five years, be compared, it will be seen that they always rose rapidly towards the close of each year; in 1854, when scarlatina was most fatal, the deaths from it were 3439, and in the last quarter of that year 1297; in 1856 they were 1795; and in the last quarter 556, having been in each of the previous three quarters about 400. Hooping-cough differs from scarlatina in this respect, that it is almost invariably most fatal in the winter quarter, viz., January, February, March, and (in the next degree) in the spring. The deaths from hooping-cough were 2078, showing a decrease on some previous years. Measles, alone of the four epidemics mentioned, exhibits an increase: in 1855 it was fatal in 864 cases, but last year in 1445.

The number of persons who died in 116 public institutions was 10,381. Nearly one person out of five who died in the year closed his days under a roof provided by public law or private charity. In workhouses the deaths of females preponderated over those of males; in hospitals for the sick, lunatic asylums, and prisons the numbers in relation to sex are inverted, the inmates of the houses last mentioned being chiefly men and boys. The deaths of soldiers and seamen, which during the war rose each year above 400 in the London military and naval hospitals, were last year 282.

On the 25th of November the temperature suddenly fell, and after remaining amidst some fluctuations low for the following ten days, it rose again on December 5th, and continued for some days higher than the mean temperature of the year. The mean temperature of the *ten cold days* was 33·6°; and it ranged from 27·7° to 47·6°. But the mean night temperature was 26·9°; and the range was from 19·4° to 35·3°. Upon the grass the thermometer fell one night to 9·5°. Fog prevailed for the first four days, but was afterwards dispelled; on Thursday, December 4th, rain fell, and an increase of 10° of temperature took place between the hours of 6h. P.M. and 8h. P.M., followed by a nocturnal rising temperature, accompanied by a magnetic disturbance. Electricity was positive throughout the period; and volleys of sparks as well as galvanic currents were frequent at first, and became constant during the last five days.

Although the temperature was not on an average below the freezing point, and the season did not, as in the six weeks ending on February 24th, 1855, when the mean temperature was 28·4°, exhibit the effects of extreme and protacted cold on the population of London, it was held to be a favourable opportunity for investigating the immediate effects of a fall to a comparatively low temperature followed by a mild temperature.

The deaths at different ages, and of the several diseases in the Nosology, were taken out for each day from November 23rd to December 13th.

The *ten* days (November 26th to December 5th) may be called *cold days;* the ten days November 23rd, 24th, December 6th to 13th, may be called *warm days*, for the sake of distinction.

The general result is that the deaths in London during *ten cold days* were 1844; while the deaths in the ten warm days were 1505. The excess of deaths in the cold days was 339, or nearly 34 daily.

Under 5 years of age the mortality was increased by cold one *fourth* part; at the age 5 to 10 there was no increase; at 10 and under 20 the increase was one *third* part; at 20—40 one *sixth* part; at 40—60 one *fifth* part; at 60—80 one *third* part. At the age 80 and upwards no effect of cold is shown.

The deaths by consumption were increased at the age 20 and under 60.

The deaths by lung diseases and heart diseases were increased by the cold; but on the brain diseases the effect is not obvious.

WARBURG'S FEVER TINCTURE.

A CORRESPONDENCE, of four letters, has recently taken place between the Reverend Philip Jacob, Rector of Crawley and Canon of Winchester, and Dr. Andrew Crawford, a physician residing in Winchester. The letters are too long to be given at length; but an outline of them is subjoined.

No. 1. The Rev. Canon Jacob writes to Dr. Crawford that, having heard from a fellow clergyman of the beneficial effects of Warburg's tincture, he at once provided himself with a small bottle. Three years, however, elapsed before he used it; he then gave it in a case of remittent fever; and, within four hours, "the diaphoretic and restorative properties of the medicine were unmistakably developed." Finding that the patient did not recover so rapidly as he expected, Canon Jacob, on the sixth day, called in a medical man, who, on seeing the case, said "that there was nothing for him to do." The case went on "to a happy termination." In another case—one of typhus—Canon Jacob suggested the use of the tincture to the medical attendant; whose readiness "to take a step out of the beaten track of the accustomed treatment" the reverend gentleman holds worthy of praise. He adds that Warburg's tincture is used by Dr. Babington and Mr. Skey, and that they have fearlessly recommended it. In concluding, he says: "I do not apologise, sir, for thus addressing you; for, besides your own high medical reputation, you have the higher character for superiority to mere professional routine. I do not doubt your willingness to inquire into the properties of this new remedy..... Prejudice against everything new in medical science is too common; and I could not anticipate the effect of my statement in some minds."

No. 2. Dr. Crawford replies that he possesses no actual knowledge on the subject; and that, although he had heard from extra professional sources reports as to the wonderful effects of Warburg's tincture in fever, he listened with great incredulity to the marvels related about secret nostrums. The case of typhus referred to by Canon Jacob had been seen by Dr. Crawford on the day following the administration of Warburg's tincture: she then was in the state in which fever patients generally are when the disease has "taken a turn"; and subsequently required the free exhibition of wine to aid her recovery. From a medical friend in London, he had learned that the tincture is said to be composed of aloes, aromatics,

and about six grains of quinine in each small bottle—each bottle being a dose. He objects to the assertion that medical practitioners are commonly influenced by prejudice against everything new: on the contrary, they are much more frequently too ardent in their pursuit after novelties. But they have the greatest aversion to "patent" medicines. He then remarks:—

"Few things are more discreditable, I think, to our age and country, than the countenance that is given to empiricism. The legislature is not ashamed to sanction the levying of a considerable revenue from the nostrums of the most unblushing quacks; and the Government stamps them, as it were, with the royal authority to delude, and too often to deal destruction among Her Majesty's subjects. The newspaper press, too, in very many instances, derives a large portion of its profits from the same source. The following statement on this point is taken from one of the medical journals" (ASSOCIATION MEDICAL JOURNAL, June 17th, 1853):

"'A standing order from half a dozen quacks for the insertion of their long advertisements, and an agency for their medicines, are, with nine of every ten provincial and colonial newspapers, necessary elements of existence. .... Piles of provincial and colonial newspapers are now before us, the majority of which are actually choked with the knavish and often indecent advertisements of notorious medical swindlers.'

"I cannot but consider that when a man, who professes to have discovered a new remedy for disease, associates himself with such impostors as these, and conceals the nature of his nostrum, instead of giving the benefit of it to science and mankind, he casts a suspicion over his integrity, which should cause him to be distrusted by the wise and the good. But, unfortunately, the *good* are not in every thing the *wise;* and the *wise* are not the *majority* of mankind: and, hence, in this self-styled 'Age of Reason,' we see imposture reaping such a harvest, even among the most elevated of the land—nay, among those also who are deemed the learned—that the satirist might not unaptly style it the 'Age of Delusions.'"

In a postscript, Dr. Crawford quotes part of a letter of Dr. Babington, stating that he (Dr. Babington) had some years ago used Warburg's tincture in Guy's Hospital, apparently with good effect. Dr. Warburg at the time promised that, if the remedy proved efficacious, he would make known of what it was composed; and asserted that it did not contain quinine. The performance of his promise, however, though claimed by Dr. Babington, was evaded. The tincture, on being analysed by Dr. Odling, was found to contain at least eight grains of quinine in each small bottle. From that time, Dr. Babington gave up all intercourse with Dr. Warburg, and all concern about his tincture.

No. 3. Canon Jacob thanks Dr. Crawford for his answer: which, he says, as he was fully aware that he was calling him to sit in judgment on a non-professional practice, he did not very much expect. He then goes on to add to his list of authorities. He says that the Warburg's tincture has been admitted into the Materia Medica of Austria; and that it has been recommended by fifty-five medical men, British and foreign; among whom are Dr. Babington and Mr. Skey. He extracts Dr. Babington's testimonials, which are as follows:

"Feb. 20th, 1851.

...."Touching my experience of Dr. Warburg's tincture, I can truly say, after having tried it in numerous cases in Guy's Hospital and elsewhere, that I consider it the most potent anti-intermittent medicine (to coin a new word) I have ever employed. Its *tonic* powers are remarkable; and in a case of continued fever in Guy's Hospital, when the convalescence, in spite of wine, and serpentary, and ammonia, and some other tonics, was tedious, and indeed very doubtful, this tincture produced a remarkable and beneficial change."

"May 29th, 1851.

...."I have met with the most strikingly successful results from the employment of your remedy. In intermittents—however severe, however confirmed, of whatever type, whether complicated with an enlarged spleen or with congested liver and jaundice—*it has never once*, out of at least twenty cases, failed to effect a speedy, nay, almost an immediate cure. The two doses of three and a half drachms each, taken according to your instructions, have in several well marked and severe cases produced the full effect of stopping at once and permanently all symptoms of ague..... In the neuralgic cases, this remarkable remedy has been, I may say, as successful as in intermittents, so far as the removal of intensely violent pain is concerned."

The following is Mr. Skey's testimonial:—

"I will not be deterred by the fear of comment from stating my conviction of the great value of the Warburg tincture as a tonic. I have saved many lives by its administration; and so long as the ends of medical science have for their object the removal of disease, and not the welfare of the profession only, I shall continue to use it. In all exhausting diseases, it is invaluable."

Canon Jacob then goes on to suggest that "it is possible that the germ or herb from which the tincture is extracted may contain disulphate of quinine"; and to support Dr. Warburg, of whom he has heard that he is "a highly educated and skilful man, and quite a gentleman, and has been honoured by a personal introduction to Her Majesty." He then, professing to have no respect for patent medicines as a class, says that he would observe the maxim, "Try all things, and hold fast that which is good." This tincture, too, he says, has a peculiarity.

"The discoverer has appealed, unlike all other patentees of medicine, to his own profession: he is no general advertiser. Instead of spending his £20,000 in advertising his medicines, he has distributed them gratis to the profession. He has given away 60,000 bottles. He has made himself poor for others. Is it wrong he should reap some return?....

"But, whatever your judgment be in this case, I feel I have a solemn duty to my fellow-creatures. I cannot look around me, and remember that nearly one-half of the earth fall a victim to fever in some of its complications, without the deepest emotion. I ask of the faculty if they are agreed in the modes of cure in regard to some of the types of this wide wasting malady? Is not the answer, in regard at least to one dominant phase, viz., continuous fever, '*We have no cure*'? Is not the practice most diverse and even contradictory? The noble science of medicine must be humble here. I desire to see the faculty keep its own high eminence among us. But this must be kept, not by a stern exclusiveness, but by a liberal observation of all known remedies. It cannot be denied that the Warburg tincture, irrespective of personality, has a fair amount of medical commendation. Will the medical men try it? If not, will the men of England discard it? It requires no great amount of medical knowledge to use it safely. Call it expensive? If it save one life, and it has confessedly saved many, it will more than compensate the purchase money."

No. 4. Dr. Crawford very fully replies to Canon Jacob's letter, and answers his enthusiastic allegations in favour of Dr. Warburg and his tincture. The following extract contains a very complete *exposé* of the whole concern:—

"Much more germane to the matter are the following particulars respecting Dr. Warburg's history, as published in the *Medical Times* of July 5, 1851, by Dr. John Davy (brother to Sir Humphrey). The facts were supplied to him by Dr. Blair, of George Town, Demerara, where the celebrated 'tincture' was first brought to light.

"'The opinion as to the basis of the drug being quinine is not founded on any chemical analysis of it, but chiefly on the fact that, at the time he was publishing the rare merits of his drug over any other febrifuge, he was purchasing from the druggists here large quantities of quinine. Upon one occasion, a little girl came to the drug shop of the late Mr. Cross, and asked to buy eight ounces of quinine, for which she had the money. Mr. Cross was surprised at the magnitude of the quantity asked for, and inquired from whom she came. The girl said she was not allowed to tell; but, Mr. Cross's curiosity being excited, he sent a servant after her, and traced the girl to the residence of Dr. Warburg.....

"'It would be very difficult indeed, for any person, in this climate and country, to collect any great quantity of plants without an assistant labourer, and without the fact being known. It would be next to impossible for this to be done, and their juices to be elaborated in quantity, and secresy preserved of the entire transaction. But Dr. Warburg was not known here as a botanist, or herbalist, or working chemist, but he was known to be buying up suspicious quantities of quinine at the moment he was proclaiming the new substitute for it...

"'I have now before me six letters from H. Willson, in London, to J. S. Stutchbery, of this city, from whom I have obtained leave to copy some extracts. These will shew you, that the appellation "humbug," which I applied to Dr. Warburg and his "Drops," in my last letter, was not uncalled for or over severe.'

"The purpose of these letters was to induce Mr. Stutchbery to undertake an agency for the sale of the 'Drops,' which Mr. Stutchbery to his credit, refused—although he was offered £100 a year to accept it, and he was not at that time in a thriving business.

"Dr. Blair continues—'Dr. Warburg, having met with no

success in Demerara, went to London, and entered into partnership with Mr. Parker, a druggist, and the "Fever Drops" became the property of *Messrs. Parker and Co.*'

"The following are some extracts from the letters of Mr. Willson, referred to by Dr. Blair:—

"'Mr. Parker undertook to bring the medicine before the public, and to conduct the mercantile part of the business, finding whatever capital might be required.—Warburg bound Parker not to endeavour to discover his secret; and to allow him to store 32 puncheons of extracts (which were said to contain the effective ingredients of 3,000,000 of bottles), where he, Warburg, chose, and in a place which was to be kept secret from Parker.—Parker paid Warburg about £600 for the duties and expenses of these extracts. He furnished a house for him at the expense of the firm, costing £360. He paid him about ten pence per bottle for the other ingredients of the medicine. Fitted up a laboratory and warehouse for the sale of it, without any limit as to the expense. Introduced Dr. Warburg to his friends as a gentleman of science and property; and *advertised* the medicine, until he had advanced nearly £3,000 in the whole....

"'At last—a variety of little circumstances occurred to throw suspicion on the truth of Warburg's high pretensions, till Parker is at length convinced.... He will not allow his capital to remain in the business, unless he is satisfied that the 32 puncheons of extracts, which were said to be shipped from Demerara, are really in existence.... He declares that he will not continue connected, in any way, with one who has been guilty of such gross misrepresentations.... He believes that the concern would yield a very good income, but says that he is prepared to face the loss of all he has embarked in it, rather than compromise his character, by continuing in partnership with.... Such is a meagre sketch of a romance of real life, which, in the hands of a novelist of genius, might be made very interesting.'

"With this 'romance' the discussion shall terminate, so far as I am concerned. Allow me, however, before concluding, to express my unfeigned respect for your benevolence, your zeal, and single-mindedness. Alas! that these truly Christian qualities should constitute the very character of all others which cunning and imposture the most eagerly try to ensnare."

ACTION FOR RECOVERY OF FEES FOR OPERATING.

Harborough County Court, 19th January, 1857.

Ody, *v.* The Guardians of Harborough Poor-Law Union.

The plaintiff conducted his own cause. Mr. Douglass appeared for the defendants.

The plaintiff stated that he sought to recover a fee of £2, for the amputation of a finger for George Bale, whom he asserted to be a pauper, and whom he attended in his capacity of parish surgeon. George Bale had been at work in the Brick Yard, at 6*s.* per week, up to the time of the accident, which occasioned the attendance of Dr. Ody. Bale applied for relief at the next meeting of the Board of Guardians, and was ordered by them to be received into the union house. His age exceeded sixteen years by a few months, by which circumstance he was no longer chargeable on his father. Mr. Douglass, for defendants, admitted the appointment *of the plaintiff as union surgeon*, and the proper amount of the fee, which is according to the scale issued by the Poor-Law Commissioners; but contended that the plaintiff was not entitled to recover—1st, because he had not obtained an order from a relieving officer or overseer to attend upon George Bale; 2nd, because George Bale was not a pauper.

The Judge decided that although an order imperatively demanded the attendance of the surgeon, the want of it did not disqualify him from giving such attendance, or from recovering his fee, on showing that the person so attended was a pauper; and in this case he was clearly of opinion that the boy was a pauper.

Mr. Douglass then objected that plaintiff had neglected to obtain, before performing the operation, the certificate of a qualified surgeon, "that the operation was necessary, and proper to be then done", as required by Art. 178 of the New Poor Law.

This objection was held to be fatal to the cause of the plaintiff, who was therefore non-suited.

Medical Society of London. On this evening (Saturday, Jan. 31st), the committee of seven members, for the purpose of selecting candidates for the various offices in the society, will be appointed. A paper on Sterility will also be read by Mr. I. B. Brown.

TO CORRESPONDENTS.

Letters and other Communications for the Journal should be directed to the private address of the Editor, 39, Curzon Street, May Fair.

To Contributors. The Editor would feel glad if Members of the Association and others, would cooperate with him in establishing as a rule, that in future no paper for publication shall exceed two pages of the Journal in length. If the writers of long communications knew as well as the Editor does, that lengthy papers *always* deter the reader from commencing them, this great evil would never arise. Brevity is the soul of medical writing—still more than of wit.

Members should remember that corrections for the current week's Journal should not arrive later than Wednesday.

A Village Doctor. Your letter arrived too late for insertion this week.

Communications have been received from:—Mr. F. T. Bond; Dr. Humphry Sandwith; Dr. King Chambers; Mr. R. Steel; Dr. Hodgkin; Mr. T. Holmes; Dr. O. Ward; Dr. Little; Dr. Cockle; Mr. E. Clarke; Dr. G. G. Rogers; Dr. F. J. Brown; Mr. William Gilbert; Mr. R. C. B. Holland; Mr. Owen Fox; Dr. Wade; Mr. Robert Stedman; Dr. Duncan Carmichael; Dr. Kidd; Dr. Edward Smith; Dr. Coates; Mr. Haynes Walton; Dr. Andrew Crawford; Dr. Maurice Davis; Mr. George Lowdell; Inquirer; Sir Charles Hastings; Mr. Richard Griffin; Dr. Thomas Williams (Swansea); Mr. Alexander Ure; Dr. J. C. Hall; Mr. Henry Spencer; Mr. William Fox (with enclosures); Mr. James H. Smith; Mr. James Bright; Mr. John G. Appleton; Mr. Part; Mr. McDermot; A Village Doctor; Mr. Southam; Mr. T. Holmes; and Mr. J. V. Solomon.

ADVERTISEMENTS.

Just published, imperial 8vo, price 5s., beautifully Illustrated,

Health and Beauty; or Corsets and CLOTHING ADAPTED TO THE PHYSIOLOGICAL LAWS OF THE HUMAN BODY. By MADAME ROXEY A. CAPLIN.
London: Darton & Co., Holborn Hill.

Bland and Long, Philosophical and CHEMICAL INSTRUMENT MAKERS, AND OPERATIVE CHEMISTS, 153, Fleet-street, London, invite the attention of the Medical Profession to their improved Medico-Galvanic Machines, which produce a continuous current of Electricity of any required intensity in One Uniform Direction; 2, 3, 4, 5, and 8 guineas. Conductors for applying the current to the spine, feet, ears, teeth, eyes, and other parts of the body, Anatomical Achromatic Microscopes, with Jointed Stands, in cases, complete, £5 5s., and upwards.

Slides of Urinary Deposits, Injections. Muscular Fibre, etc. Chemical Chests arranged for the analysis of urine, and for Toxicological purposes. Urinometers in metal (gilt), 14s. each; ditto in glass, 4s. 6d., 8s. 6d., 15s. and 30s. each.

The London and Provincial Medical PROTECTION SOCIETY, 43, Lincoln's Inn Fields, London. Conducted by a responsible Committee of Medical Men.

President.
JOHN PROPERT, Esq.

Trustees.

Nathaniel Clifton, Esq., Islington	John Propert, Esq., New Cavendish St.
Horatio Day, Esq., Isleworth	George Webster, M.D., Dulwich

Committee.

John Armstrong, M.D., Gravesend	Edwin Hearne, M.B., Southampton
A.B. Barnes, Esq., King's Rd., Chelsea	John Higginbottom, Esq., Nottingham
Adolphus Barnett, M.B., Commercial Road East	C. F. J. Lord, Esq., Hampstead
S. A. Bindley, Esq., Birmingham	W. C. Meates, Esq., Chester Square
J. M. Bryan, Northampton	J. Parrott, Esq., Clapham
J. M. Dempsey, Esq., Goswell Street	J. Sharp, Esq., Grosvenor Street West, Eaton Square
R. Dunn, Esq., Norfolk St., Strand	Thomas R. Simonds, Esq., Brighton
R. D. Edgcumbe, Esq., Shaftesbury Crescent	R. Smith, Esq., Portsmouth
Wm. C. Engledue, M.D., Portsmouth	Arthur B. Steele, Esq., Liverpool
Booth Eddison, Esq., Nottingham	H. Terry, Esq., Northampton
Geo. Fincham, Esq., Spring Gardens	Thos. Taylor, Esq., Birmingham
F. Godrich, Esq., New Brompton	T. G. Traquair, M.D., 1, Eccleston Square
J. H. Gramshaw, Esq., Gravesend	Thomas B. Winter, Esq., Brighton
John Harrison, Esq, Chester	John Weaver, Esq., Chester

Treasurer.
Robert Dunn, Esq.

Bankers.
Messrs. Gosling and Sharpe, 19, Fleet Street.

Secretary Superintendent.
John Capes, Esq.

The objects of this Society are—

1st. To provide a safe and efficient medium by which the Medical Profession may secure more certain and regular payment for their services; with every consideration for the convenience of those who are willing, but unable directly to discharge their liabilities; with rigour from those who are able, but have not the disposition, to remunerate medical men.

2nd. With the machinery necessary for carrying out the foregoing purpose to establish a means of privately negotiating the transfer of Practices and Partnerships.

3rd. A Register is kept for Assistants and Pupils.

4th. To raise a Benevolent Fund by devoting to that object the profits arising from the general operations of the Society,

The Members of this Society consist of qualified Practitioners *only*. Annual Subscription, One Guinea; a Firm, consisting of two Partners, a Guinea and a half; a Firm of three Partners, Two Guineas. Fixed rates of Commission are charged on business transacted.